

DIVJE RASTOČE ORHIDEJE BELE KRAJINE v naravi in na vezeninah

mag. Jernej Kavšek

v sodelovanju s študijskim krožkom Orhideje in vezenine



WILD ORCHIDS OF BELA KRAJINA in Nature and on Embroidery

Jernej Kavšek M.Sc.

in collaboration with the study circle Orchids and Embroidery

KAZALO

PREDGOVOR	4	TRANSILVANSKA PRSTASTA KUKAVICA	42
UVOD	6	BEZGOVA PRSTASTA KUKAVICA	44
BELA KRAJINA	8	ZELENI VOLČJI JEZIK	46
SPLOŠNO O ORHIDEJAH	11	TEMNORDEČA MOČVIRNICA	48
RAZŠIRJENOST ORHIDEJ V BELI KRAJINI	15	GREUTERJEVA MOČVIRNICA	50
STENIČJA KUKAVICA	22	ŠIROKOLISTNA MOČVIRNICA	52
NAVADNA KUKAVICA	24	KRATKOLISTNA MOČVIRNICA	54
MOČVIRSKA KUKAVICA	26	OZKOUSTNA MOČVIRNICA	56
METULJASTA KUKAVICA	28	PREZRSTA MOČVIRNICA	58
PIRAMIDASTI PILOVEC	30	DROBNOLISTNA MOČVIRNICA	60
BLEDNA NAGLAVKA	32	MÜLLERJEVA MOČVIRNICA	62
DOLGOLISTNA NAGLAVKA	34	NAVADNA MOČVIRNICA	64
RDEČA NAGLAVKA	36	PONTSKA MOČVIRNICA	66
MESNORDEČA PRSTASTA KUKAVICA	38	PURPURNA MOČVIRNICA	68
FUCHSOVA PRSTASTA KUKAVICA	40	NAVADNI KUKOVIČNIK	70

INDEX

PREFACE	4	TRANSYLVANIAN HEATH SPOTTED ORCHID	43
INTRODUCTION	6	ELDER-FLOWERED ORCHID	45
BELA KRAJINA - (WHITE CARNIOLA)	8	FROG ORCHID	47
GENERAL INFORMATION ABOUT WILD ORCHIDS	11	DARK-RED HELLEBORINE	49
DISTRIBUTION OF WILD ORCHIDS IN BELA KRAJINA	16	GREUTER'S HELLEBORINE	51
BUG ORCHID	23	BROAD-LEAVED HELLEBORINE	53
GREEN-WINGED ORCHID	25	ORBICULAR BROAD-LEAVED HELLEBORINE	55
MARSH ORCHID	27	NARROW-LIPPED HELLEBORINE	57
PINK BUTTERFLY ORCHID	29	NARROW-LIPPED NEGLECTED HELLEBORINE	59
PYRAMIDAL ORCHID	31	SMALL-LEAVED HELLEBORINE	61
WHITE HELLEBORINE	33	MÜLLER'S HELLEBORINE	63
SWORD-LEAVED HELLEBORINE	35	MARSH HELLEBORINE	65
RED HELLEBORINE	37	PONTIC HELLEBORINE	67
EARLY MARSH ORCHID	39	VIOLET HELLEBORINE	69
COMMON SPOTTED ORCHID	41	FRAGRANT ORCHID	71

GOSTOCVETNI KUKOVIČNIK	72	ŠKRLATNORDEČA KUKAVICA	102
DEHTEČI KUKOVIČNIK	74	DVOLISTNI VIMENJAK	104
JADRANSKA SMRDLJIVA KUKAVICA	76	ZELENKASTI VIMENJAK	106
NAVADNA SPLAVKA	78	ZAVITA ŠKRBICA	108
JAJČASTOLISTNI MUHOVNIK	80	NAVADNA OBLASTA KUKAVICA	110
TRIZOBA KUKAVICA	82	ŠTUDIJSKI KROŽKI	112
PIKASTOCVETNA KUKAVICA	84	ŠTUDIJSKI KROŽEK: ORHIDEJE IN VEZENINE	112
POLETNA KUKAVICA	86	ČLANICE ŠK ORHIDEJE IN VEZENINE	113
RJAVA GNEZDOVNICA	88	SEZNAM IMEN ORHIDEJ	115
ČEBELJELIKO MAČJE UHO	90	SEZNAM ZNANSTVENIH IMEN ORHIDEJ	117
ČMRJELIKO MAČJE UHO	92	UPORABLJENA LITERATURA IN VIRI	119
MUHOLIKO MAČJE UHO	94		
OSJELIKO MAČJE UHO	96		
ZVEZDASTA KUKAVICA	98		
BLEDA KUKAVICA	100		

DENSE-FLOWERED FRAGRANT ORCHID	73	LADY ORCHID	103
SHORT-SPURRED FRAGRANT ORCHID	75	LESSER BUTTERFLY ORCHID	105
ADRIATIC LIZARD ORCHID	77	GREATER BUTTERFLY ORCHID	107
VIOLET LIMODORE	79	AUTUMN LADY'S TRESSES	109
TWAYBLADE	81	GLOBE ORCHID	111
THREE-TOOTHED ORCHID	83	STUDY CIRCLES	112
BURNT-TIP ORCHID	85	STUDY CIRCLE: ORCHIDS AND EMBROIDERY	113
SUMMER BURNT-TIP ORCHID	87	MEMBERS OF THE STUDY CIRCLE ORCHIDS AND	
BIRD'S NEST ORCHID	89	EMBROIDERY	113
BEE ORCHID	91	INDEX OF COMMON NAMES OF ORCHIDS	115
LATE SPIDER ORCHID	93	LIST OF THE SCIENTIFIC NAMES OF ORCHIDS	117
FLY ORCHID	95	REFERENCES	119
EARLY SPIDER ORCHID	97		
SHOWY EARLY PURPLE ORCHID	99		
PALE FLOWERED ORCHID	101		

PREDGOVOR

Divje rastoče orhideje ali kukavičevke spadajo v skupino semenk in so zaradi barvitosti in zanimive zgradbe cvetov med botaniki zelo priljubljene. Razvojno so mlada skupina in genetsko manj stabilna, zato se pri nekaterih vrstah pojavljajo morfološko in genotipsko različne oblike, ki jih botaniki ovrednotijo kot podvrste in varietete. Med njimi so pogoste spremembe v zgradbi cvetov in socvetij ter številni barvni različki. Zaradi navedenih lastnosti botaniki iščejo rastišča in pogostost pojavljanja orhidej na nekem območju.

Eden od najbolj prizadavnih je Jernej Kavšek, ki je natančno raziskal pojavljanje kukavičevk v Beli krajini, rezultat tega dela pa je pričujoča knjiga.

Jernej Kavšek, avtor knjige *Divje rastoče orhideje Bele krajine v naravi in na vezeninah*, se je že v začetku tega tisočletja začel resno ukvarjati s samoniklimi orhidejami. Najprej jih je spoznaval širše po Sloveniji, kasneje pa se je podrobno in sistematično lotil raziskovanja vrst v Beli krajini, kjer je tudi doma. Poznavanje nahajališč in posameznih vrst orhidej je želel deliti z drugimi ljubitelji narave, zato je na medmrežju postavil spletno stran *Orhideje Bele krajine* (www.orhideje-bk.eu). Z odličnimi fotografijami in natančnimi podatki o habitatih za posamezne vrste kukavičevk je presestil in navdušil tako ljubiteljske kot tudi profesionalne botanike. Pri tem mu je pomagalo tudi bogato strokovno znanje s področja agronomije in varovanja okolja. Svoje rezultate proučevanja kukavičevk je objavil v več člankih. Med pomembnejšimi sta strokovna članka Nekatera zanimiva rastišča orhidej v Beli krajini (monografija *Narava Bele krajine*, 2013) in Prispevek k poznovanju orhidej v Beli krajini (*Folia biologica et geologica*, 2015). Poljudne članke o orhidejah

PREFACE

Wild growing orchids or »kukavičke« belong to the group of spermatophytes that are very popular among botanists because of their colour and their interesting flower structure. They are a developmentally young group and genetically less stable, so some species have morphologically and genotypically different forms, which botanists evaluate as subspecies and varieties. Among them there are frequent changes in the structure of flowers and inflorescences, and many colour variations. Due to these characteristics, botanists are looking for the habitats and how frequently the orchids occur in an area.

One of the most dedicated is Jernej Kavšek, who has thoroughly researched the occurrence of wild orchids in Bela krajina, and the result of his work is this book. Jernej Kavšek, the author of the book *Wild Orchids of Bela krajina in Nature and on Embroidery* first started researching wild orchids at the beginning of the millennium. At first he came across them around Slovenia, but later he started researching the species in detail and systematically throughout Bela krajina, where he lives. He wanted to share his knowledge of the locations and individual species of orchids with other nature lovers, and set up the website *Orchids of Bela krajina* (www.orhideje-bk.eu). He surprised and impressed both amateur and professional botanists with his excellent photographs and accurate data of the habitats of individual species of orchids. His rich expertise in the field of agronomy and environmental protection helped him a great deal. He wrote several articles in which he presented the results of his study of wild orchids. Among the most important are articles: *Interesting Habitats of Orchid in Bela krajina* (published in the monograph *Nature of Bela krajina*, 2013) and *Contribution to the Familiarity of Orchids in Bela krajina* (published in *Folia biologica et geologica*, 2015). His articles

Bele krajine je objavljaj v Slovenskih novicah, reviji Zeleni gaj in lokalnem glasilu Belokranjec. Kot izvrsten poznavalec orhidej in rastlinstva je imel predavanja v Botaničnem društvu Slovenije, Planinskem društvu Ljubljana-Matica, po šolah, društvih in raznih javnih medijih. Na njih je kot naravovarstvenik opozarjal na možnost izumiranja orhidej, ki so med drugim lahko posledica uničevanja mokrišč, zaraščanja travnišč ali pa prekomernega izkoriščanja travniških habitatov. V sodelovanju z Zavodom za izobraževanje in kulturo Črnomelj je aktivno sodeloval pri študijskem krožku Orhideje in vezenine, kjer je vodil botanično svetovanje motivov orhidej na vezeninah.

Jernej Kavšek je kot rezultat dvajsetletnega proučevanja orhidej napisal knjigo, v kateri je opisal 45 vrst in podvrst orhidej, ki uspevajo v Beli krajini, kar pomeni skoraj polovico vseh vrst, ki uspevajo v Sloveniji. Med njimi so tudi takšne, ki so bile v Beli krajini prepoznane kot nove in posledično omenjene prvič. Posebno vrednost imajo tudi tiste vrste, ki so na Rdečem seznamu ogroženih rastlinskih vrst v Republiki Sloveniji, in vse, ki so v Sloveniji zavarovane z Uredbo o ogroženih rastlinskih vrstah.

Vsekakor bo knjiga nepogrešljiv vodnik za vse, ki želijo na terenu spoznavati kukavičevke na območju Bele krajine, morda pa navduši še koga, da bo pobliže pogledal okolico, v kateri živi, in si razširil vedenje o divje rastočih orhidejah v Sloveniji.

Branko Dolinar

about the orchids of Bela krajina were published in the newspaper Slovenske novice, in the magazine Zeleni gaj and in the local monthly review Belokranjec. As an excellent connoisseur of orchids and vegetation, he gave lectures at the Botanical Society of Slovenia, the Ljubljana-Matica Mountaineering Society, at schools and in other societies, and in various publications. As a nature conservationist, he drew attention to the possibility of the extinction of orchids, which could be as a result of the destruction of wetlands, the overgrowing of grasslands or the over-exploitation of grassland habitats. In co-operation with the Institute for Education and Culture Črnomelj, he actively participated in the study circle Orchids and Embroidery, where he helped with his rich botanical knowledge regarding the orchid motifs on the embroideries. As a result of his twenty-year study he has written a reference book in which he described 45 species and subspecies of orchids that thrive in Bela krajina, what is almost half of all the species that thrive in Slovenia. Among them are also those that were recognised in Bela krajina as new varieties, and so consequently mentioned for the first time. Of particular value are also those species that are on the Red List of Endangered Plant Species in the Republic of Slovenia, and all those that are protected in Slovenia by the Decree on Endangered Plant Species.

The reference book will definitely be an indispensable guide for all those who want to get to know orchids in Bela krajina. It may inspire people to take a closer look at the area where they live and expand their knowledge about wild orchids which thrive in Slovenia.

Branko Dolinar

UVOD

Okolje, v katerem živimo, je v zadnjem obdobju postalo izredno dinamično in vse več znanstvenih ugotovitev kaže, da je v veliki meri za to odgovoren človek. Izsekavanje tropskih gozdov, »polja« plastičnih vrečk v oceanih, povečevanje območij puščav, ozonska »luknja«, katastrofični vremenski pojavi so le nekateri od teh. To so problemi, za katere dobimo občutek, da se dogajajo nekje drugje, hkrati pa ne vidimo, da se tudi pri nas dogajajo resne okoljske spremembe. Ena najpomembnejših je zagotovo splošno zmanjševanje biotske pestrosti. Ker trenutno še vedno živimo v relativno biotsko pestremu okolju, z veliko rastlinskimi in živalskimi vrstami, problem težje opazimo. Nadaljevanje upada biotske pestrosti bo prineslo probleme z oprševanjem nekaterih kulturnih rastlin, zmanjšalo bo rodovitnost zemlje, povečalo nevarnost erozije, povečalo poplavno ogroženost ... To bo v končni fazi povzročilo naraščanje stroškov, predvsem proizvodnje hrane.

Splošno velja, da so orhideje odličen pokazatelj, kako biotsko pestro oz. »zdravo« je določeno območje. Kjer orhideje ne uspevajo, tam se navadno biotska pestrost izgublja. Vzrok za to je zelo občutljiva povezava orhidej z okoljem. Že najmanjša sprememba v okolju lahko pomeni, da se poruši ta krhek odnos, kar lahko pripelje do postopnega upadanja števila orhidej in končno do njihovega izumrtja. Trenutno so najbolj ogrožene travniške orhideje, ki v Beli krajini izginjajo zaradi vse bolj intenzivne rabe nekaterih travnikov. Takšne travnike se namreč bolj gnoji in zato se jih kosi po tri- in večkrat na sezono, kar zmanjšuje biotsko pestrost tako rastlin kot živali na njih. Po drugi strani pa so travniške orhideje v Beli krajini še mnogo bolj ogrožene zaradi zaraščanja, ker se opušča košnja predvsem suhih ekstenzivnih travnikov, na katerih jih uspeva največ in predvsem tiste najlepše orhideje.

INTRODUCTION

The environment in which we live has in recent times become extremely dynamic, and more and more scientific findings show that mankind is largely responsible for this. Deforestation of tropical forests, "fields" of plastic bags in the oceans, an increase of desert areas, "holes" in the ozone layers and catastrophic weather phenomena are just some of them. We feel that these problems are happening somewhere else, but at the same time we do not recognise that serious environmental changes are taking place in our own country as well. One of the most important is certainly the general reduction of biodiversity. As at the moment we still live in a relatively biologically diverse environment, with a large number of plants and animal species, the problem is more difficult to spot. The continued decline in biodiversity will bring problems regarding the pollination of some crops. Furthermore, it will reduce soil fertility and increase the risks of erosion and flooding. This will eventually cause an increase in costs, especially the costs involved in food production.

It is generally accepted that wild orchids are an excellent indicator of how biologically diverse or "healthy" a specific area is. Where wild orchids do not grow, there the biodiversity has most probably disappeared. The reason for this is the very sensitive connection of wild orchids with the environment. Even the slightest change in the environment can cause this fragile relationship to be disrupted, gradually leading to a decline in the number of wild orchids, and eventually their extinction. At the moment, the most endangered are meadow orchids which are disappearing in Bela krajina because of the increasingly intensive overuse of some meadows. They are fertilised more and therefore they are mowed three or more times in a season, which reduces the biodiversity of both plants and animals. On the other hand, in Bela krajina meadow orchids are even more endangered because the meadows are becoming overgrown. The

Kljud vsemu imamo v Beli krajini srečo, da se je ohranilo relativno veliko število orhidej, saj je bilo do sedaj odkritih vsaj 45 vrst in podvrst. To uvršča Belo krajino med z orhidejami bolj bogate slovenske pokrajine, kjer je bilo odkritih okoli 95 vrst in podvrst orhidej.

Raznolikost Bele krajine se kaže tudi v pestrosti orhidej, saj so bile pri nas najdene nekatere zelo redke vrste (jadranska smrdljiva kukavica, metuljasta kukavica, škrlatnordeča kukavica, greuterjeva močvirnica, ozkoustna močvirnica), kot tudi izredno bogata nahajališča bolj pogostih vrst (navadna kukavica, trizoba kukavica, zavita škrbica, transilvanska prstasta kukavica).

Ta pestrost in bogastvo orhidej Bele krajine je vse bolj prepoznanata tudi med Belokranjci. Lep primer je moje sodelovanje s študijskim krožkom Orhideje in vezenine ZIK Črnomelj, katerega sad je ta knjiga. V knjigi se je združilo moje poznavanje orhidej Bele krajine s spretnostmi članic krožka. Preplet obojega se odraža v fotografijah in vezeninah v naravi rastočih orhidej. To delo predstavlja prvo poljudno predstavitev tega naravnega bogastva Bele krajine in opomnik, da moramo to bogastvo varovati vsi, ne samo ozek krog poznavalcev.

mowing of mainly dry extensive meadows, where the most beautiful meadow orchids grow, is being abandoned.

Nevertheless, in Bela krajina we are lucky that a relatively large number of wild orchids have been preserved, as at least 45 species and subspecies have been discovered so far. This places Bela krajina among the richer Slovenian regions with wild orchids, where about 95 species and subspecies of wild orchids have already been discovered. The diversity of Bela krajina is also reflected in the diversity of its wild orchids, as some very rare species have been found such as the Adriatic Lizard Orchid, the Pink Butterfly Orchid, the Lady Orchid, the Greuter's Helleborine and the Narrow-lipped Helleborine, as well as the extremely rich habitats of more common species like the Green-winged Orchid, the Three-toothed Orchid, the Autumn Lady's Tresses, and the Transylvanian Heath Spotted Orchid.

This diversity and richness of the wild orchids of Bela krajina have lately become increasingly recognised among the people of Bela krajina. A good example of this is my collaboration with the Study Circle of Orchids and Embroidery at ZIK Črnomelj, the fruit of which is this book. The book combines my knowledge of the wild orchids of Bela krajina with the skills of the members of the study circle. The intertwining of both is reflected in the photos and the embroideries of the wild orchids. This book represents the first popular presentation of this natural treasure of Bela krajina, and is a reminder that we all have a duty to protect this wealth and not just leave it to a small circle of experts.

BELA KRAJINA

Bela krajina (območje občin Semič, Metlika in Črnomelj) leži na jugovzhodu Slovenije. Meri 595 km² in je geografsko dokaj zaključena enota. Na severu in severozahodu je omejena z Gorjanci in Kočevskim Rogom, na jugozahodu se suhe doline (Stari trg, Špeharji in Sinji Vrh) zajedajo v zahodni del Poljanske gore, na jugu in vzhodu pa je Bela krajina omejena z reko Kolpo.

Bela krajina je tipična kraška pokrajina, kjer prevladujeta apnenec in dolomit, z manjšim območjem v okolici vasi Drašiči, kjer se pojavlja lapor. Posledica kraškega značaja je, da je v Beli krajini malo površinskih voda. V osrednjem delu, v porečju Lahnje in ob Kolpi, se pojavljajo rečni in drugi nanosi, kar nekoliko spremeni sicer karbonatne tipe prsti.

Podnebje nižinske Belo krajine lahko označimo kot zmerno celinsko ali subpanonsko, vendar z delno mediteranskim padavinskim režimom in s suhimi poletji. To pomanjkanje padavin daje določenim mikrolokacijam na južnih pobočjih nad reko Kolpo skoraj submediteranski značaj podnebja. Na obrobju, v Kočevskem Rogu in na Gorjancih, se zaradi večje nadmorske višine pojavlja gorska klima z večjo količino padavin kot na nižinskem delu.

Prevladujoči kraški relief je verjetno vzrok, da je Bela krajina bistveno bolj gozdnata kot znaša slovensko povprečje (59 %), saj kar 69 % površja predstavlja gozd (Slika 2). Posledično je tudi gostota

Slika 1: Bela krajina

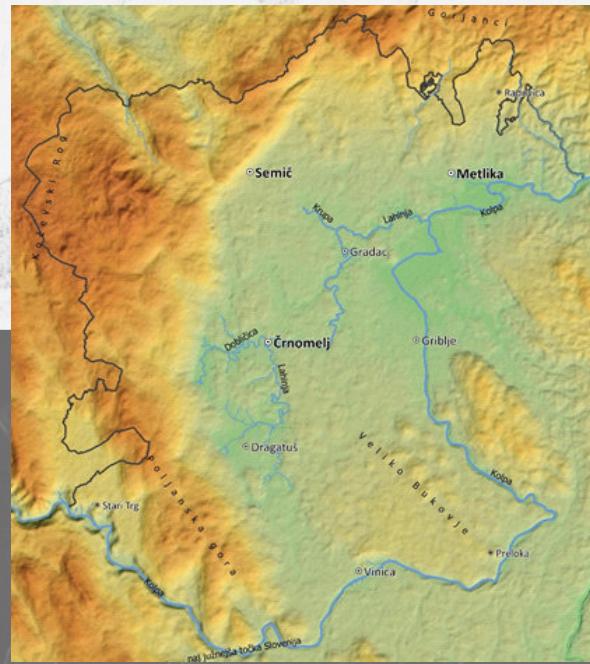


Figure 1: Bela krajina

BELA KRAJINA - (WHITE CARNIOLA)

Bela krajina lies in the south-east of Slovenia and comprises the municipalities of Semič, Metlika and Črnomelj. It measures 595 km² and is a geographically whole area. In the north and north-west it is surrounded by the Gorjanci hills and the Kočevski Rog. In the southwest there are dry valleys, where the villages of Stari trg, Špeharji and Sinji Vrh are situated. These valleys spread into the western part of the Poljanska gora. In the south and in the east Bela krajina is bordered by the river Kolpa.

Bela krajina is a typical karst landscape dominated by limestone and dolomite, and marl which occurs in a small area around the village of Drašiči. The effect of the karst characteristic is that there is very little surface water in Bela krajina. In the central part, in the Lahnja river basin and along the Kolpa river, other deposits appear, which slightly change the carbonate types of soil.

The climate in the lowland of Bela krajina can be described as temperate continental or sub-Pannonian with a partly Mediterranean precipitation regime and dry summers. This lack of rainfall gives certain microlocations on the southern slopes above the river Kolpa an almost sub-Mediterranean climate. On the edges, in the Kočevski Rog and the Gorjanci hills, there is a mountain climate with a larger amount of rainfall than in the lowlands due to the higher altitude.

prebivalstva (leto 2019 – 45 prebivalcev na km²) bistveno nižja od slovenskega povprečja (leto 2019 – 103 prebivalcev na km²).

Po podatkih Ministrstva za kmetijstvo, gozdarstvo in prehrano (v nadaljevanju: Ministrstvo za kmetijstvo) so v letu 2019 travniki zavzemali 15,2 % površja, sledile so njivske površine s 6,2 %. Za obe kategoriji velja, da je delež manjši kot znaša slovensko povprečje (delež travnikov v Sloveniji: 19 %, delež njiv v Sloveniji: 9 %) (Slika 3). Večji delež gozda in manjša deleža njiv in travnikov razkrijeta, da je Bela krajina v primerjavi s slovenskim povprečjem manj kmetijska pokrajina.

Slika 2: Delež površine gozda od površine kvadranta 250×250 m. (VIR: Ministrstvo za kmetijstvo – Grafični sloj dejanske rabe kmetijskih zemljišč za leto 2020)

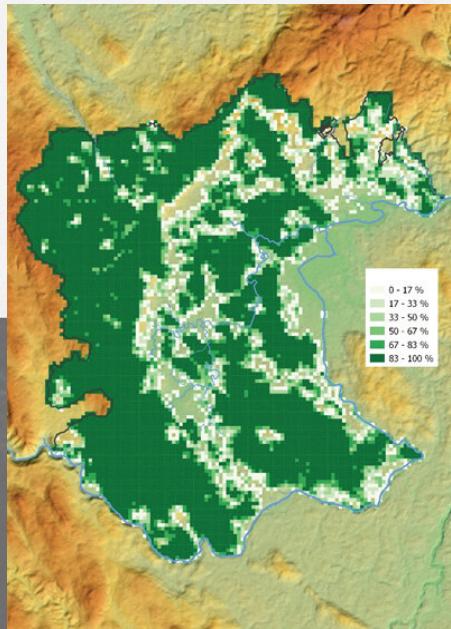


Figure 2: The proportion of forests of all surfaces on the 250 × 250 m quadrant. (Source: Ministry of Agriculture, Forestry and Food- Graphic layer of actual agricultural land use in 2020)

Slika 3: Delež površine trajnega travinja od kmetijskih površin na kvadrantu 250×250 m. (VIR: Ministrstvo za kmetijstvo – Grafični sloj dejanske rabe kmetijskih zemljišč za leto 2020)

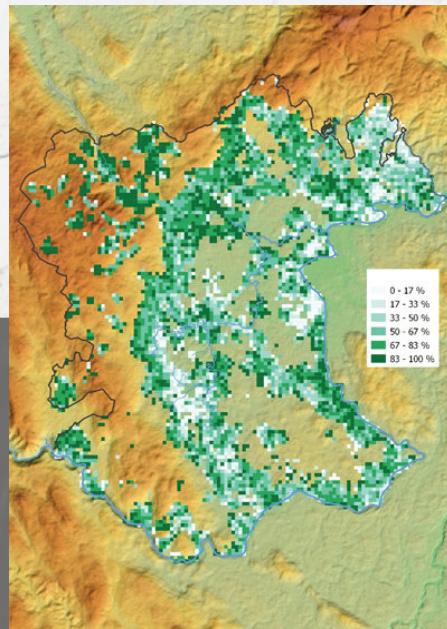


Figure 3: The proportion of permanent grassland on agricultural land on the 250 × 250 m quadrant. (Source: Ministry of Agriculture, Forestry and Food - Graphic layer of the actual use of agricultural land for 2020)

Slika 4: Delež površine njiv od kmetijskih površin na kvadrantu 250×250 m. (VIR: Ministrstvo za kmetijstvo – Grafični sloj dejanske rabe kmetijskih zemljišč za leto 2020)

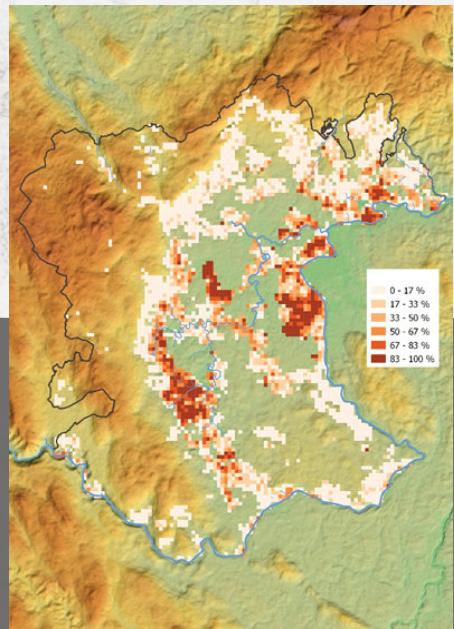


Figure 4: The proportion of arable land on agricultural land on the 250 × 250 m quadrant. (Source: The Ministry of Agriculture, Forestry and Food Graphic layer of actual agricultural land use in 2020)

The predominantly karst relief is probably why Bela krajina is significantly more wooded than the Slovenian average, which is 59%. In Bela krajina nearly 69% of the surface is covered by forest (Figure 2). As a result, the population density, which in 2019 was 45 inhabitants per km², is significantly lower than the Slovenian average, which in the same year was 103 inhabitants per km².

According to the Ministry of Agriculture, Forestry and Food (hereinafter called The Ministry of Agriculture) in 2019

Obstajajo določene zgostitve kmetijstva na območjih, kjer je pokrajina manj kraška in zato bolj primerna za kmetijstvo. To je v okolici Dragatuša, območje severno od Črnomelja in območje ob Kolpi (od Gribelj do Rosalnic). Tu je koncentracija njivskih površin bistveno višja in koncentracija travnikov bistveno nižja kot drugje v Beli krajini (Slika 3, Slika 4).

Glede na podatke Ministrstva za kmetijstvo so se površine trajnih travnikov od leta 2009 do 2019 zmanjšale za okoli 2.000 ha. Skoraj polovica se jih je zarastla, nekaj več kot eno četrtino pa spremenila v njive. Zaraščanje je pričakovano najbolj intenzivno na robnih območjih, na severu (Radovica, Jugorje) in na jugovzhodu (Preloka, Adlešiči, Bojanci, Vinica, Sinji Vrh), kjer je delež travnikov še vedno visok (Slika 5). Proses zaraščanja je lepo viden tudi iz primerjave satelitskih posnetkov iz let 1984 in 2018. Na južnem delu Bele krajine je v tem obdobju razvidno zaraščanje predvsem okolice Preloke, Sinjega Vrha, Starega trga in Bojancev (Slika 6).

Nasprotno je spremjanje travnikov v zaraščajoče se površine najmanj intenzivno na območjih, kjer prevladujejo njivske površine (v okolici Dragatuša, območje severno od Črnomelja in območje ob Kolpi, od Gribelj do Rosalnic). Na teh območjih je večji problem sprememba trajnih travnikov v njive, vendar so ti travniki s stališča orhidej nekoliko manj pomembni, ker gre v glavnem za travnike na boljših tleh, kjer je v osnovi manj orhidej.

meadows covered 15.2% of the area, followed by arable land with 6.2%. It is evident for both categories that the proportion is lower than the Slovenian average (the proportion of meadows in Slovenia is 19%, and the proportion of arable land is 9%). (Figure 3) A larger proportion of forest and a smaller proportion of arable land and meadows reveal that Bela krajina is a less agricultural region compared to the Slovenian average. There are certain concentrations of agriculture in areas where the landscape is less karstic, and therefore more suitable for agriculture. This is in the vicinity of the village of Dragatuš, in the areas north of Črnomelj, and along the river Kolpa from the villages of Griblje to Rosalnice. There the concentration of arable land is significantly higher and the concentration of meadows is much lower than elsewhere in Bela krajina (Figure 3 , Figure 4).

According to the Ministry of Agriculture data, the area of permanent grassland decreased by around 2,000 hectares from 2009 to 2019. Nearly half of them have become overgrown and just over a quarter have been turned into arable land. The overgrowth is expected to be most intensive in the marginal areas located in the north, round the villages of Radovica and Jugorje, and in the south-east where the villages of Preloka, Adlešiči, Bojanci, Vinica and Sinji Vrh are located. There the proportion of permanent grassland is still high (Figure 5). The process of overgrowing is also clearly visible when comparing satellite images taken in 1984

Slika 5: Intenzivnosti spremembe trajnih travnikov v zaraščajoče površine v obdobju od 2009–2020. (VIR: Ministrstvo za kmetijstvo – Grafični sloj dejanske rabe kmetijskih zemljišč za leto 2009 in 2020)

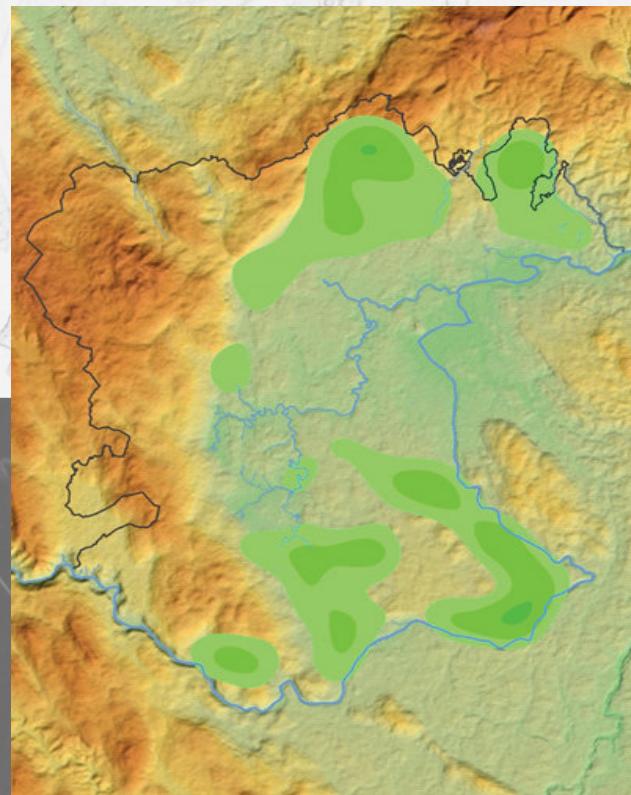


Figure 5: Intensities of the change of permanent grassland into overgrown areas in the period from 2009 to 2020. (Source: Ministry of Agriculture, Forestry and Food - Graphic layer of the use of actual agricultural land for the years 2009 and 2020)

SPLOŠNO O ORHIDEJAH

Orhideje (kukavičevke) so s čez 25.000 vrstami najbolj obsežna družina (*Orchidaceae*) med vsemi rastlinami. Večina jih uspeva v tropskih in subtropskih območjih, najpogosteje v krošnjah dreves. V našem evropskem zmernem pasu je število vrst in podvrst (v nadaljevanju: vrst) orhidej bistveno manjše (celotna Evropa – čez 300, Grčija – čez 200, Hrvaška – okoli 150, Slovenija – okoli 95) in rastejo izključno v tleh.

Od ostalih rastlinskih vrst se orhideje ločijo po značilni zgradbi cveta, ne glede na to, ali gre za v naravi rastoče ali »okenske« vrste. Cvet je sestavljen iz šestih cvetnih listov, in sicer treh zunanjih (*sepali*) in treh notranjih (*petali*) (Slika 7, Slika 8, Slika 10). Za orhideje je najbolj značilen največji notranji cvetni list ali medena ustna (*labelum*) (Slika 7, Slika 8, Slika 10), ki je navadno najbolj barvit in igra pomembno vlogo pri privabljjanju opraševalcev. Pri več vrstah je medena ustna podaljšana v ostrgo na zadnji strani cveta, kjer je shranjen nektar, ki je nagrada za opraševalce. Trije zunanji in dva notranja cvetna lista se pri nekaterih vrstah ne razprejo in tvorijo t. i. čelado (Slika 9).

Slika 6: Satelitski posnetek iz leta 1984 in 2018. (VIR: Google Earth Engine)



Figure 6: Satellite image from 1984 and 2018. (Source: Google Earth Engine)

bigger problem is the conversion of permanent grassland into arable land. From the point of view of orchids, these meadows are less important because the soil is richer, meaning that there are basically fewer orchids growing.

GENERAL INFORMATION ABOUT WILD ORCHIDS

With over 25,000 species, orchids (*Orchidaceae*) are the most abundant family of all plants. Most of them thrive in tropical and subtropical areas, most frequently in the crowns of trees. In the European temperate zone, the number of

with the images taken in 2018. In the southern part of Bela krajina in this era, the overgrowing of the surroundings can be seen around the villages of Preloka, Sinji Vrh, Stari trg and Bojanci (Figure 6).

By contrast, the conversion of grassland into overgrown areas is the least intensive in areas where arable land predominates. This can be seen in the vicinity of the village of Dragatuš, in the areas to the north of Črnomelj and along the river Kolpa from the villages of Griblje to Rosalnice. In these areas the

Najbolj se cvet orhidej od cvetov ostalih rastlin razlikuje v osrednjem delu. Pestič je skupaj z običajno enim prašnikom združen v t. i. stebriček (*ginostemij*). Prašnik je sestavljen iz dveh polinarijev, ki imata na vrhu lepljiv skupek pelodnih zrn. Le-ta se prilepijo na oprševalca, ki jih odnese na drug cvet. Oprševanje je pri nekaterih vrstah zelo občutljiv proces, saj jih lahko opršujejo samo določene vrste žuželk. Pomankanjanje oprševalcev lahko, kljub idealnim razmeram za rast orhidej, pomeni njihovo izumrtje. Takšne orhideje so bistveno bolj občutljive na vse spremembe v okolju, zato je njihovo varovanje in ohranjanje oteženo, saj je potrebno poleg habitata varovati tudi njihove oprševalce.

Mogoče še bolj zapleten od oprševanja je odnos orhidej z glivami v koreninskem sistemu. Ta odnos se začne že v trenutku, ko semena padejo na zemljo. Semena orhidej so zelo drobcena (manjša kot 1 mm, Slika 11), kar jim omogoča, da jih veter raznaša zelo daleč. Ta prednost pa ima obenem pomembno slabost, da zaradi svoje majhnosti semena

Slika 7: Cvet osjelikega mačjega ušesa (*Ophrys sphegodes*) (1 – zunanjci cvetni listi, 2 – notranja cvetna lista, 3 – medena ustna, 4 – stebriček)



Figure 7: Flower of the Early Spider Orchid (*Ophrys sphegodes*) (1 - outer sepals, 2 - inner petals, 3 - lip or labellum, 4 - column)

Slika 8: Cvet navadne močvirnice (*Epipactis palustris*) (1 – zunanjci cvetni listi, 2 – notranja cvetna lista, 3 – medena ustna, 4 – stebriček)



Figure 8: Flower of the Marsh Helleborine (*Epipactis palustris*) (1 - outer sepals, 2 - inner petals, 3 - lip or labellum, 4 - column)

Slika 9: Cvet škrlatnordeče kukavice (*Orchis purpurea*) (3 – medena ustna, 5 – čelada)



Figure 9: Flower of the Lady Orchid (*Orchis purpurea*) (3 - lip, 5 - helmet)

Slika 10: Cvet dvolistnega vimenjaka (*Platanthera bifolia*) (1 – zunanjci cvetni listi (srednji in dva stranska), 2 – notranja cvetna lista, 3 – medena ustna, 6 – vhod v ostrogo, 7 – ostroga, 8 – polinaria)

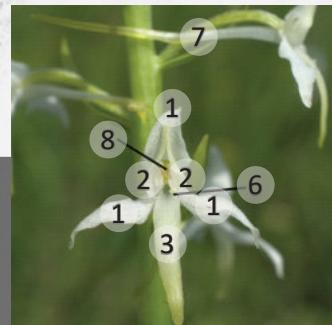


Figure 10: Flower of the Lesser Butterfly Orchid (*Platanthera bifolia*) (1 - outer sepals (middle and two lateral), 2 - inner petals, 3 - lip or labellum, 6 - entrance to the spur, 7 - spur, 8 - polynaria)

species and subspecies (hereinafter called species) of orchids is significantly smaller. In the whole of Europe there are over 300 species, in Greece over 200, in Croatia about 150, and in Slovenia about 95. They grow exclusively on the ground.

Orchids differ from other plant species by their characteristic flower structure, regardless of whether they are species growing in nature or on our window sills. The flower consists of six petals, namely three of them are external sepals and three are inner petals (Figure 7, Figure 8, Figure 10). Orchids are mainly characterised by the largest inner petal named lip or labellum (Figure 7, Figure 8, Figure 10), which is usually the most colourful and plays an important role in attracting pollinators. In several species, the honey lip is extended into a spur at the back of the flower where nectar is stored, and which serves as a reward for pollinators. The three outer and two inner petals do not spread in some species and form a so-called helmet (Figure 9).

nimajo rezervne hrane za začetek rasti nove rastlinice. To pomanjkljivost pa orhideje nadomestijo tako, da dovolijo posebnim glivam »okužiti« seme. Tako imenovane glive pestunje mladi rastlinici dovajajo vsa potrebna hraniila v začetku rasti. Od tega ima koristi samo orhideja, kar postavlja mlade orhideje v zajedavsko vlogo. Pri večini orhidej se ta odnos prekine, ko odrastejo. Odrasle orhideje pa vzpostavijo nov odnos, imenovan mikoriza, kjer z glivami ostanejo povezane preko koreninskega sistema do konca (Slika 12, Slika 13). Ta povezava je izredno občutljiva in predstavlja enega večjih problemov pri ponovnem naseljevanju orhidej na območja, kjer so v preteklosti izumrle. Zaradi pretrganja mikorizne povezave med orhidejami in glivami je presajanje odraslih rastlin skoraj nemogoče. To je po eni strani tudi dobro, ker preprečuje presajanje orhidej iz naravnega okolja na domače vrtove.

Včasih pa je ta mikorizni odnos tudi pri odraslih rastlinah neuravnotežen, lahko celo parazitski. Kar nekaj vrst (npr. rjava gnezdovnica, *[Neottia nidus-avis]*) popolnoma izgubi klorofil in postane v popolnosti odvisna od hranil, ki jih dovajajo glive. Nekatere orhideje (npr. drobnolistna močvirnica *[Epipactis microphylla]*, navadna splavka *[Limodorum abortivum]*) sicer ohranijo klorofil in majhne zelene liste, vendar še vedno večino hranil pridobijo od gliv. Obstajajo pa

Slika 11: Plodeča navadna splavka *[Limodorum abortivum]* in povečana (na sliki cca. 1×1 cm) semena zavite škrbice *[Spiranthes spiralis]*.

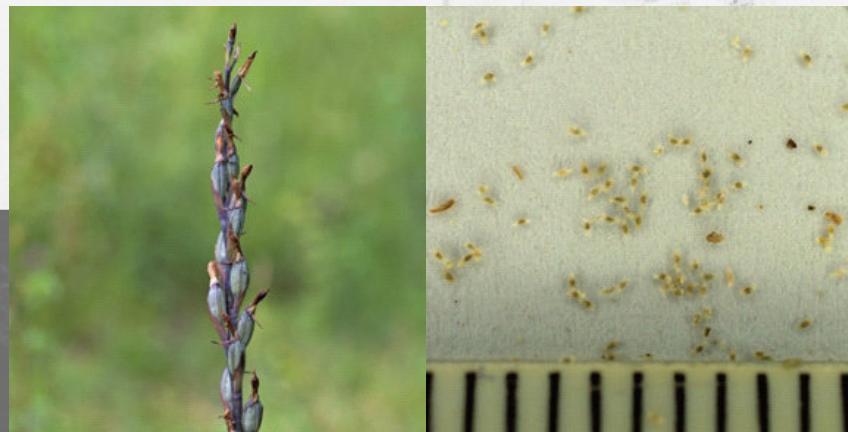


Figure 11: The Violet Limodore (*Limodorum abortivum*) and enlarged (in the picture approx. 1 × 1 cm) seeds of the Autumn Lady's Tresses (*Spiranthes spiralis*).

Slika 12: Koreninski sistem rjave gnezdovnice (*Neottia nidus-avis*), ki v Sloveniji ni na seznamu ogroženih vrst.



Figure 12: Root system of the Bird's Nest Orchid (*Neottia nidus-avis*), which is not on the list of endangered species in Slovenia.

The flower of the orchid mainly differs from the flowers of other plants in its central part. The pistil is usually joined to one stamen and forms a column (*gynostemium*). The stamen consists of two polynarii, which have a sticky set of pollen grains on the top. They stick to the pollinator, which takes them to another flower. Pollination is a very sensitive process in some species, as they can be pollinated only by certain types of insects. The lack of pollinators can, despite the ideal conditions for the growth of orchids, cause their extinction. Such orchids are significantly more sensitive to any changes taking place in the environment, so their protection and conservation is difficult, as in addition to their habitat, it is necessary to protect their pollinators too.

Perhaps even more complicated than pollination is the relationship of orchids with fungi in the root system. This relationship begins as soon as the seeds fall onto the ground. Orchid seeds are very tiny (less than 1mm, Figure 11), thus allowing them to be carried by the wind. At the same time, this advantage has an important disadvantage as well. Because of their small size, the seeds do not have any reserve of nutriment to start the growth of a new plant. However,

Slika 13: Koreninski sistem (gomoljčka) zavite škrbice (*Spiranthes spiralis*), ki ga pogosto izkopljejo divji prašiči za prehranjevanje. V nekaterih državah na jugu Balkana in v Turčiji iz gomoljčkov, predvsem navadne kukavice (*Anacamptis morio*), izdelujejo osvežilno pičajo salep. Zaradi množičnega ruvanja gomoljev je na omenjenih območjih navadna kukavica (*Anacamptis morio*) ogrožena.



Figure 13: The root system - a tuber of the Autumn Lady's Tresses (*Spiranthes spiralis*), is often rooted up by wild pigs for food. In some countries in the southern Balkans and in Turkey, a refreshing drink called salep is made particularly from the tubers of the Green-winged Orchids (*Anacamptis morio*). Due to mass pruning of these tubers, the Green-overgrown Orchid (*Anacamptis morio*) is endangered in the above mentioned areas.

orchids compensate for this shortcoming by allowing special fungi to "infect" the seeds.

The so-called fungal "nanny" supplies the young plant with all the necessary nutrients at the beginning of its growth. Only the orchid benefits from this relationship, which puts young orchids in a parasitic role. In most orchids, this relationship breaks down when they become fully-grown. Fully-grown orchids, on the other hand, establish a new relationship called mycorrhiza, where they remain connected to the fungi through the root system until they die. (Figure 12, Figure 13). This symbiosis is extremely sensitive and poses one of the major problems in repopulating orchids in areas where they have become extinct in the past. Due to the severing of the mycorrhizal connection between orchids and fungi, transplanting fully-grown plants is almost impossible. On the one hand, this is also good because it prevents orchids being

tudi orhideje, predvsem travniške vrste npr. navadna kukavica (*Anacamptis morio*), zelenkasti vimenjak (*Platanthera chlorantha*), škrlatnordeča kukavica (*Orchis purpurea*), ki hranila proizvajajo sama v zelenih delih rastline in imajo z glivami uravnotežen simbiotski odnos, podobno kot večina ostalih zelenih rastlin.

Ta raznolikost odnosov z glivami omogoča orhidejam, da uspevajo skoraj v vseh habitatih, tudi na takšnih, ki so za večino ostalih rastlin skrajno neprimerni (npr. gozdna tla, mokrišča). Kljub temu

Slika 14: Številčna populacija navadne kukavice (*Anacamptis morio*) v okolici Drežnika.



Figure 14: Size of the population of the Green-winged Orchid (*Anacamptis morio*) in the vicinity of the village of Drežnik.

pa so orhideje v osnovi dokaj redke rastline. Velikokrat se zgodi, da tudi na biotsko zelo pestrih območjih ne uspeva nobena orhideja. Ko pa so vsi dejavniki za rast optimalni, se lahko določene vrste na mikrolokaciji razmnožijo skoraj v »monokulture« kot navadna kukavica (*Anacamptis morio*) (Slika 14) ali zavita škrbica (*Spiranthes spiralis*).

Vsi navedeni odnosi orhidej z okoljem jih postavljajo na sam vrh rastlinske piramide in mnogi botaniki jih štejejo za primate rastlinskega sveta. Ti posebni odnosi z okoljem so tudi njihova slabost, saj lahko že majhna sprememba povzroči njihovo izumrtje. V večini primerov te spremembe povzroča človek s svojo dejavnostjo npr. izsuševanjem močvirij, prekomerno izrabo travnikov in tudi z nedejavnostjo – opustitvijo košnje. Izrednega pomena je, da so naši posegi v okolje čim bolj uravnoteženi in vedno se je potrebno vprašati, kako bo določen poseg vplival na okolje. Orhideje so namreč sestavni del biotsko pestrega okolja, ki mora biti zdravo in dolgoročno stabilno.

RAZŠIRJENOST ORHIDEJ V BELI KRAJINI

Botanična pestrost Bele krajine je v primerjavi z ostalo Slovenijo precej velika. Na tem relativno majhnem območju je bilo po sedaj znanih podatkih najdena ena tretjina vseh rastlinskih vrst, ki uspevajo v Sloveniji. Specifičnost klime Bele krajine se odraža tudi v tipih rastlin, saj se kar ena tretjina vseh vrst uvršča v sredozemsko in jugovzhodno evropsko skupino. Podobno »bogata« je Bela krajina tudi z orhidejami. Do leta 2002 je bilo po literaturnih podatkih v kvadrantih (za kartiranje flore v Srednji Evropi se uporablja t. i. »MTB kvadranti«, ki imajo površino okoli 35 km^2 , za prikaz pa se lahko uporabi tudi polovica ali četrtina osnovnega MTB kvadranta), ki se nahajajo na območju Bele krajine, najdenih 38 vrst orhidej (Slika 15).

transplanted from their natural environment to people's gardens.

Sometimes, however, this mycorrhizal relationship is unbalanced, even parasitic, in fully-grown plants. Quite a few species (e.g. the Bird Nest Orchid [*Neottia nidus-avis*]) completely lose their chlorophyll and become totally dependent on the nutrients supplied by the fungi. Some orchids such as the Small-leaved Helleborine (*Epipactis microphylla*), and the Violet Limodore (*Limodorum abortivum*) usually retain their chlorophyll in their small green leaves, but still obtain most of their nutrients from fungi. There are also orchids, especially the meadow species such as the Green-winged Orchid (*Anacamptis morio*), the Greater Butterfly Orchid (*Platanthera chlorantha*) and the Lady Orchid (*Orchis purpurea*), which produce nutrients on their own in the green parts of the plant and have a balanced symbiotic relationship with the fungi, similar to most other green plants.

This diversity of relationships with fungi allows orchids to thrive in almost all habitats, even in those that are extremely unsuitable for most other plants (e.g. forest ground and wetlands). Nevertheless, orchids are basically fairly rare plants. It often happens that there are no orchids in biodiverse areas. However, when all growth conditions are optimal, certain species such as the Green-winged Orchid (*Anacamptis morio*) (Figure 14) or the Autumn Lady's Tresses (*Spiranthes spiralis*) can reproduce almost in "monocultures" at the microlocation.

All the above-mentioned relationships of orchids with the environment place them at the very top of the plant pyramid, and therefore many botanists consider them to be the "primates" of the plant world. These special relationships with the environment are also their weakness, as even a small change can lead to their extinction. In most cases these changes are caused by man with his activities e.g. the drainage of wetlands, excessive use of meadows and also by inactivity such as the abandonment of mowing. It is extremely important that our activities in the environment

Slika 15: Število orhidej (38 vrst) v MTB kvadrantih iz literturnih podatkov do leta 2002 (Vir: N. Jogan: Gradivo za Atlas flore Slovenije – 2001 in V. Ravnik: Orhideje Slovenije – 2002)

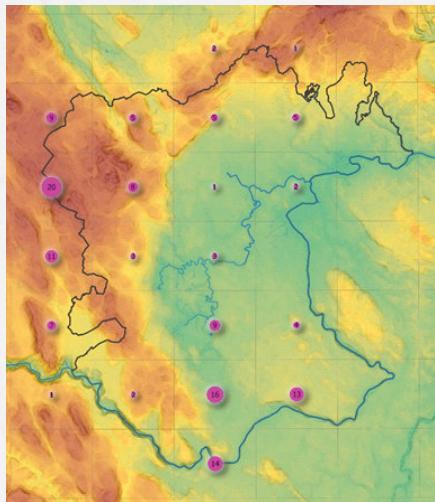


Figure 15: The number of orchids (38 species) in MTB quadrants from literature data up to 2002 (Source: N. Jogan: Material for the Atlas of Flora of Slovenia - 2001 and V. Ravnik: Orchids of Slovenia - 2002)

Slika 16: Število najdenih orhidej (45 vrst) v MTB kvadrantih od leta 2002 do 2020 (Vir: Osebna baza najdb Jernej Kavšek)

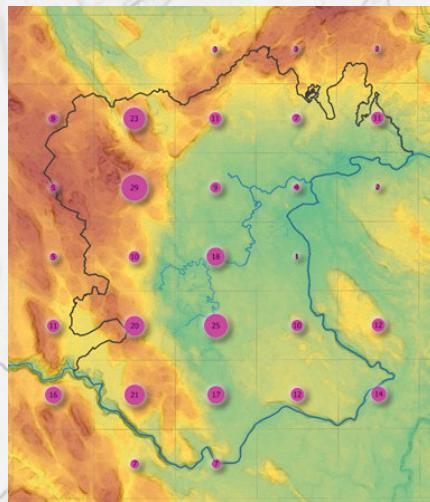


Figure 16: The Number of orchids found (45 species) in MTB quadrants from 2002 to 2020 (Source: Personal database of findings by Jernej Kavšek)

Slika 17: Gostota najdenih vrst orhidej od leta 2002 (Vir: Osebna baza najdb Jernej Kavšek)

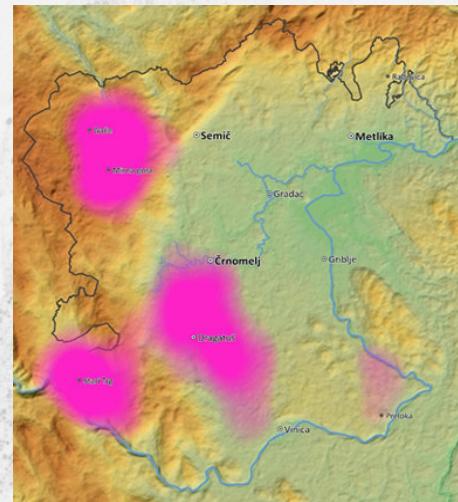


Figure 17: The Density of orchid species found since 2002 (Source: Personal database of findings by Jernej Kavšek)

are as balanced as possible, and it is always necessary to consider how a certain activity will affect the environment. Orchids are an integral part of a biodiverse environment that has to be healthy and stable in the long run.

DISTRIBUTION OF WILD ORCHIDS IN BELA KRAJINA

The botanical diversity of Bela krajina is quite sizeable compared to the rest of Slovenia. According to the data known so far, one third of all plant species that thrive in Slovenia have been found in this relatively small area. The specificity of the climate of Bela krajina is also reflected in the types of plants, as nearly one third of all species belong to the Mediterranean and South-Eastern European group. Bela krajina is similarly "rich" with orchids. Up until 2002, according to data found in literature, in the quadrants 38 species of orchids have been found in the area of Bela krajina (Figure 15). The "MTB quadrants" with an area of about 35 km² are used to map the flora in Central Europe, but for a display half or a quarter of the basic MTB quadrant can be used too.

I started to make a list of orchid sites in Bela krajina in 2002, and up until 2020 as many as 1,355 orchid sites have been recorded with the help of other nature lovers and my botanist friends. Meadow orchids stand out in terms of the number of recorded localities, as the Green-winged Orchid (*Anacamptis morio*), the Three-toothed Orchid (*Neotinea*

Od leta 2002, ko sem se začel ukvarjati s popisovanjem rastišč orhidej v Beli krajini, do leta 2020 sem skupaj z ljubitelji narave in prijatelji botaniki v Beli krajini evidentiral kar 1.355 najdišč orhidej. Po številu evidentiranih nahajališč izstopajo travniške orhideje, saj navadna kukavica (*Anacamptis morio*), trizoba kukavica (*Neotinea tridentata*) in zavita škrbica (*Spiranthes spiralis*) uspevajo na 51 % evidentiranih nahajališčih v Beli krajini. Kar nekaj orhidej je redkih in so bile popisane na samo nekaj nahajališčih, kar dodatno potrjuje veliko pestrost in posebnost flore Bele krajine.

Skupaj smo v Beli krajini do leta 2020 popisali 45 različnih vrst (Slika 16), kar pomeni približno polovico vseh orhidej, ki uspevajo v Sloveniji. Od 38 vrst orhidej, ki so po pisnih podatkih uspevale v preteklosti, smo ponovno potrdili 34 vrst. Štiri vrste: lepi čeveljc (*Cypripedium calceolus*), majska prstasta kukavica (*Dactylorhiza majalis*), belkaste ročice (*Pseudorchis albida*) in čeladasta kukavica (*Orchis militaris*) nismo več našli. Posebno vrednost predstavljajo najdbe desetih novo odkritih vrst kukavičevk, ki na območju Bele krajine do leta 2002 še niso bile evidentirane.

V tem obdobju se je bistveno povečalo število najdenih vrst v posameznih kvadrantih, pri čemer je kar 5 kvadrantov z več kot 20 najdenimi vrst, prav tako pa ni več nobenega kvadranta brez najdene vrste orhidej. To povečanje zagotovo ne pomeni, da se je od leta 2002 do 2020 število vrst povečalo zaradi izboljševanja stanja habitatov, ampak samo kaže na dejstvo, da je bila Bela krajina, v določenih pogledih pa je še vedno, botanično zelo slabo raziskana. Zaradi tega je izredno težko natančneje oceniti spremembo razširjenosti in ogroženost orhidej v Beli krajini. Verjetno bo moj trud in trud sodelavcev poplačan v prihodnje, ko bo mogoče z veliko več podatki bolje oceniti spremembe razširjenosti in ogroženosti orhidej ter s tem posredno oceniti stanje biotske raznovrstnosti Bele krajine.

V Beli krajini po številčnosti vrst izstopajo tri območja: severozahodni del (Mirna gora in Gače), Poljanska dolina in osrednji nižinski del v okolici Dragatuša (Slika 17).

tridentata) and the Autumn Lady's Tresses (*Spiranthes spiralis*) thrive in 51% of the recorded localities in Bela krajina. Quite a few orchids are rare and have been listed in only a few sites, which further confirms the great diversity and uniqueness of the flora in Bela krajina.

By 2020, 45 different species in total have been listed in Bela krajina (Figure 16), which means about half of all the orchids that thrive in Slovenia. Of the 38 species of orchids that have thrived in the past, according to literature data, we have reconfirmed 34 species. Four species like the Lady's Slipper Orchid (*Cypripedium calceolus*), the Broad-leaved Marsh Orchid (*Dactylorhiza majalis*), the Small White Orchid (*Pseudorchis albida*) and the Military Orchid (*Orchis militaris*) are no longer found. The findings of ten newly discovered species of orchids are of special value. They were not recorded in the area of Bela krajina until 2002.

During this period, the number of newly discovered species in individual quadrants has increased significantly. There are as many as 5 quadrants where more than 20 species have been found, and there is no longer any quadrant where a species of orchids has not been discovered. This increase certainly does not mean that the number of species grew from 2002 to 2020 because of habitat improvements, but only points to the fact that Bela krajina has been botanically very poorly researched in the past, and in some respects this is still the case today. Because of this, it is extremely difficult to assess more precisely the change in the distribution and endangerment of orchids in Bela krajina. It is likely that my efforts and the efforts of my colleagues will be rewarded in the future, when it will be possible to assess better the changes in the distribution and endangerment of orchids with much more data, and thus indirectly assess the state of biodiversity in Bela krajina.

In Bela krajina three areas stand out in terms of the number of species. They are the north-western part which includes

V širši okolici Mirne gore, smo evidentirali 28 različnih vrst, od tega kar deset vrst iz rodu močvirnic (*Epipactis sp.*). To seveda ni presenetljivo, glede na to, da so močvirnice rod, ki v glavnem uspeva v gozdovih, na območju Mirne gore, kjer prevladuje bukovo jelov gozd. Nekoliko presenetljivo glede na dokaj visoko nadmorsko višino, je rastišče škrlatnordeče kukavice (*Orchis purpurea*) v okolici Planine (okoli 700 m n. m.), ki velja za bolj toploljubno vrsto in v Beli krajini večinoma uspeva na nižjih nadmorskih višinah.

Po številu vrst (20) je v severozahodnem delu Bele krajine podobno bogata tudi okolica zapuščene kočevarske vasi Gače, ki se nahaja na podobnih nadmorskih višinah kot okolica Mirne gore. Pomembna razlika pa je, da je na smučišču in okoliških osamelih travnikih (Ponikve, Ribnik in Resa) bistveno več travniških orhidej, predvsem zaradi ohranjanja redne košnje. Tukaj je potrebno omeniti predvsem rastišča navadne oblaste kukavice (*Traunsteinera globosa*) in zelenega volčjega jezika (*Dactylorhiza viridis*), ki sta vrsti višjih nadmorskih višin in se pričakovano pojavljata na najvišjem delu Bele krajine.

Širša okolica Starega trga je drugo območje z največ najdenimi vrstami (26). Zanimivo je bogato rastišče jadranske smrdljive kukavice (*Himantoglossum adriaticum*), ki se razprostira v okolici vasi Radenci v zapuščenih vinogradih in zarastlih sadovnjakih. Presenetljivo pa je dokaj veliko rastišče transilvanske prstaste kukavice (*Dactylorhiza maculata subsp. transsilvanica*) na steljnikih nad Radenci.

Ta vrsta je namreč v Beli krajini veliko bolj pogosta v osrednjem nižinskem delu. V Poljanski dolini, kjer so ohranjeni pusti suhi travniki, po pogostnosti prevladejo travniške orhideje, kot so: navadna kukavica (*Anacamptis morio*), trizoba

Mirna gora and the village of Gače, the Valley of Poljane, and the central lowland part in the vicinity of the village of Dragatuš (Figure 17).

In the wider vicinity of Mirna gora, 28 different species have been recorded, of which as many as ten belong to the genus of the Helleborine (*Epipactis sp.*) This are not surprising, because the Helleborines belong to a genus that thrives mainly in forests, and in the area of Mirna gora where beech and fir forests predominate. It is rather surprising regarding the relatively high altitude, that the habitat of the Lady Orchid (*Orchis purpurea*) is around the village of Planina which is about 700 m above sea level. It is considered to be a more thermophilic species and mostly thrives at lower altitudes in Bela krajina.

In terms of the numbers of species (20), the surroundings of the abandoned Gottscheer village of Gače in the north-western part of Bela krajina, which are located at similar altitudes as the surroundings of Mirna gora, is similarly rich with orchids. An important difference is that there are significantly more meadow orchids growing on the ski slope and in the surrounding isolated meadows round the villages of Ponikve, Ribnik and Resa, mainly because regular mowing still takes place. It is important to mention the habitats of the Globe Orchid (*Traunsteinera globosa*) and the Frog Orchid (*Dactylorhiza viridis*), which are species of higher altitudes and are expected to occur in the highest part of Bela krajina.

The wider surroundings of the village of Stari trg are the second area where the most species have been found (26). Around the village of Radenci, in abandoned vineyards and overgrown orchards spreads the interesting and rich habitat of the Adriatic Lizard Orchid (*Himantoglossum adriaticum*). Surprisingly, there is a fairly large habitat of the Transylvanian Heath-spotted Orchid (*Dactylorhiza maculata subsp. transsilvanica*) in the fern fields above the village of Radenci. This species is much more common in Bela krajina in the central lowland. In the Valley of Poljane, where

kukavica, (*Neotinea tridentata*), osjeliko mačje uho (*Ophrys sphegodes*), čebeljeliko mačje uho (*Ophrys apifera*) in zavita škrbica (*Spiranthes spiralis*).

Kot je bilo prikazano na sliki 6, se je območje kmetijske krajine v Poljanski dolini v preteklosti zelo spremenilo. Večina njivskih površin se je spremenila v travnike, travniki na gozdnem robu pa so se začeli zaraščati. Trenutno sicer kaže, da se je trend zaraščanja nekoliko ustavil, kar bi lahko pozitivno vplivalo na razširjenost orhidej. Neizogibno pa se bodo dokončno zarastli manj kmetijsko produktivni suhi travniki na obrobju, kjer je največ travniških orhidej.

V osrednjem nižinskem delu Bele krajine (okolica Dragatuša) je bilo najdenih 25 vrst orhidej. Zaradi redkih vlažnih habitatov v Beli krajini je potrebno izpostaviti najdišča orhidej na vlažnih območjih ob zgornjem toku reke Lahnje. V Belačkih (Lahnjskih) in Nerajskih lugih ter niže v okolini Goleka in Zorencev uspevajo velike populacije močvirne kukavice (*Anacamptis palustris*), mesnordeče prstaste kukavice (*Dactylorhiza incarnata*) in navadne močvirnice (*Epipactis palustris*). Zanimivo je, da med 2002 in 2020 na tem območju ni bila odkrita majska prstasta kukavica (*Dactylorhiza majalis*), katere rastišče je omenjeno v literaturi in bi jo glede na primeren habitat bilo tudi pričakovali.

Na pustih suhih travnikih in streljnikih na celotnem območju uspeva transilvanska prstasta kukavica (*Dactylorhiza maculata* subsp. *transsilvanica*), ki je na nekaj lokacijah izredno številčna, kar kaže, da ji takšni habitat zelo ustreza. V Beli krajini samo na tem območju uspevata zelenkasti vimenjak (*Platanthera chlorantha*) in dehtički kukovičnik (*Gymnadenia odoratissima*). Presenetljiva je najdba zelenega volčjega jezika (*Dactylorhiza viridis*), ki je bolj pogost v severozahodnem delu Bele krajine na višjih nadmorskih višinah.

barren, dry meadows are still preserved, there meadow orchids such as the Green-winged Orchid (*Anacamptis morio*), the Three-toothed Orchid, (*Neotinea tridentata*), the Early Spider Orchid (*Ophrys sphegodes*), the Bee Orchid (*Ophrys apifera*), and the Autumn Lady's Tresses (*Spiranthes spiralis*) dominate.

As has been shown in Figure 6, the area of the agricultural landscape in the Valley of Poljane has changed tremendously in the past. Most of the arable land has been turned into meadows, and those meadows which are situated at the edge of the forests are starting to become overgrown. At the moment, it seems that the overgrowth has to an extent stopped, which could have a positive effect on the distribution of orchids. Inevitably, less agriculturally productive dry meadows on the periphery, where most meadow orchids thrive, will finally become overgrown.

In the central lowland part of Bela krajina near the village of Dragatuš, 25 species of orchid have already been found. Due to the rare wetland habitats in Bela krajina, it is necessary to highlight the orchid sites in wetlands along the upper course of the river Lahnja. Large populations of the Marsh Orchid (*Anacamptis palustris*), the Early Marsh Orchid (*Dactylorhiza incarnata*), and the Marsh Helleborine (*Epipactis palustris*) thrive in Belački (Lahnjski) and Nerajski lug, as well as lower down in the vicinity of the villages of Golek and Zorenci. It is interesting that from 2002 to 2020 the Broad-leaved Marsh Orchid (*Dactylorhiza majalis*), whose habitat is mentioned in the literature, was not found in this area, although we would expect to find it there because of the suitable habitat.

The Transylvanian Heath Spotted Orchid (*Dactylorhiza maculata* subsp. *transsilvanica*) thrives in barren dry meadows and fern fields throughout the region. It is extremely numerous in a few locations, which show that such habitats suit it. The Greater Butterfly Orchid (*Platanthera chlorantha*) and the Short-spurred Fragrant Orchid (*Gymnadenia odoratissima*) grow only in this area in Bela krajina. More surprising is the discovery of the Frog Orchid (*Dactylorhiza*

Posebnost celotnega območja osrednje nižinske Bele krajine je zelo zanimiv preplet intenzivnega kmetijstva in biotsko izredno pestrih suhih, vlažnih in zamočvirjenih travnikov ob reki Lahinja. Na območju Belčjega Vrha in Nerajca, na nekaj 100 kvadratnih metrih, uspevajo tako tipične močvirške orhideje kot tudi orhideje pustih suhih travnikov, obdajajo pa jih njivske površine. Takšna mozaičnost krajine se trenutno še vedno ohranja zaradi nekoliko boljših socioekonomskih razmer prebivalstva v teh vaseh in naporov upravljalcev Krajinskega parka Lahinja. Tako kot povsod v Beli krajini so najbolj ogrožene kmetijsko manj produktivne površine (suhi travniki na obrobju njivskih površin, vlažni in zamočvirjeni travniki).

Na območjih, kjer se v Beli krajini trenutno dogaja intenzivno zaraščanje (okolica Preloke in severovzhodni del Bele krajine med Semičem in Metliko), je bilo odkritih nekoliko manjše število orhidej. To je lahko posledica zaraščanja ali pa dejstva, da je bilo izvedenih manj terenskih popisov in zato manj evidentiranih orhidej. Kljub temu je bilo tudi na teh dveh območjih odkritih kar nekaj zanimivih nahajališč z orhidejami.

Na prvem mestu je to zagotovo nahajališče metuljaste kukavice (*Anacamptis papilionacea*), ki ga je v letu 2020 nad Rožnim dolom odkril Jože Kosec. Razširjenost jadranske smrdljive kukavice (*Himantoglossum adriaticum*) v Beli krajini dopolnjujeta dve novo odkriti nahajališči v okolici vasi Vidošiči, kjer istočasno uspevajo tudi škrlatnordeča kukavica (*Orchis purpurea*), čebeljeliko mačje uho (*Ophrys apifera*) in čmrljeliko mačje uho (*Ophrys holoserica*). Zanimivost teh habitatov v okolici Vidošičev je, da se nahajajo na območju, kjer skoraj ni travnikov, prevladujejo pa vinogradi.

Vsa evidentirana nahajališča in vse najdene vrste kažejo, da je Bela krajina v slovenskem merilu še vedno pokrajina z veliko pestrostjo orhidej. Glede na ugotovljene trende je očitno, da so manj ogrožene gozdne orhideje in zaradi

viridis), which is more common in the north-western part of Bela krajina at higher altitudes.

A special feature of the entire area of the central lowland of Bela krajina is the very interesting intertwining of intensive agriculture and biotically extremely diverse dry, moist, and wetland meadows along the river Lahinja. Around the villages of Belčji Vrh and Nerajec, in the space of a few hundred square metres, both typical wetland orchids and orchids of barren, dry meadows grow. They are surrounded by arable land. Such a mosaic landscape is currently still maintained due to the slightly better socio-economic conditions of the population in these villages and the efforts of the managers of the Lahinja Nature Park. As everywhere in Bela krajina, the most endangered are agriculturally less productive areas such as dry meadows on the edge of arable land and wetland meadows.

In areas where intensive overgrowing is currently occurring in Bela krajina such as around the village of Preloka and in the north-eastern part of Bela krajina, between Semič and Metlika, a slightly smaller number of orchids have been discovered. This may be due to overgrowth, or to the fact that fewer field censuses have been carried out and therefore fewer orchids have been recorded. Nevertheless, quite a few interesting orchid sites have been found in these two areas as well.

In the first place, this is certainly the case with the location of the Pink Butterfly Orchid (*Anacamptis papilionacea*), which was discovered in 2020 above the village of Rožni dol by Jože Kosec. The distribution of the Adriatic Lizard Orchid (*Himantoglossum adriaticum*) in Bela krajina is complemented by two newly discovered localities in the vicinity of the village of Vidošiči, where the Lady Orchid (*Orchis purpurea*), the Bee Orchid (*Ophrys apifera*) and the Late Spider Orchid (*Ophrys holoserica*) grow as well. The interesting fact about these habitats in the vicinity of the village of Vidošiči is that they are located in an area where there are almost no meadows, and where vineyards predominate.

zaraščanja veliko bolj travniške orhideje. Samo upamo lahko, da bodo pridne belokrangske roke še naprej obdelovale tudi manj donosne kmetijske površine in jih ohranile, skupaj z orhidejami, tudi za naše zanamce.



Vezilja/Embroidereress: Anica Jesih



Vezilja/Embroidereress: Marija Marušič



Vezilja/Embroidereress: Verica Šikonja

Legenda k pregledu orhidej

Legend to review
orchids

Zavarovana vrsta;
Ogrožena vrsta



Protected species,
Endangered species

Zavarovana vrsta



Endangered species

Čas cvetenja



Flowering Season

Velikost



Height



Vezilja/Embroidereress: Tatjana Jakofčič



Vezilja/Embroidereress: Marija Žunič



Vezilja/Embroidereress: Marija Prašin
Kolbezen

All recorded localities and all newly - found species show that Bela krajina is still a region with the greatest diversity of orchids in Slovenia. Regarding established trends, it is obvious that forest orchids are less endangered than the meadow orchids due to overgrowing. We can only hope that the diligent hands of people who live in Bela krajina will continue to cultivate less profitable agricultural areas and preserve them together with the orchids for our descendants.

STENIČJA KUKAVICA

Anacamptis coriophora (L.) R. M. Bateman, Pridgeon & M. W. Chase



V-VI



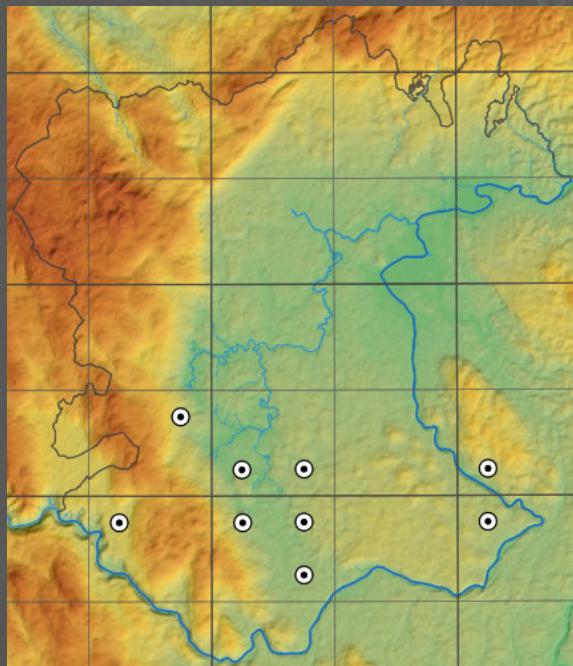
15-30cm

Vezilja/Embroidereress: Mira Madronič



Slovensko ime je dobila po neprijetnem vonju, ki spominja na stenice (npr. ščitaste stenice – *Pentatomidae*). Raste na suhih negnojenih travnikih, ki so največ dvakrat košeni. V času cvetenja jo lahko zamenjamo samo z dišečo kukavico (*A. coriophora* subsp. *fragrans*), ki pa cveti izključno na Primorskem in ima lep prijeten vonj po vanilji. Steničja kukavica se v Sloveniji pojavlja bolj redko, v Beli krajini pa je, predvsem v južnem delu, pogosta. Zelo zanimivo je njen rastišče v okolici vasi Belčji Vrh, kjer na nekaj hektarjih uspeva ena večjih populacij te vrste v Sloveniji.

BUG ORCHID



It gets its Slovenian name after its unpleasant scent, which resembles the smell of shield bugs (Pentatomidae). It grows on dry unferalised meadows, which are mown not more than twice a year. During the flowering season, it can only be mistaken for the Fragrant Bug Orchid (*A. coriophora* subsp. *fragrans*), which blooms exclusively in the Primorska region and has a pleasant vanilla scent. The Bug Orchid is quite rare in Slovenia, but commonly grows in Bela krajina, especially in the southern part. Its habitat in the vicinity of the village of Belčji Vrh is very interesting. There, in only a very few hectares of land, grows one of the largest populations of this species in Slovenia.



NAVADNA KUKAVICA

Anacamptis morio (L.) R. M. Bateman, Pridgeon & M. W. Chase



IV-VI

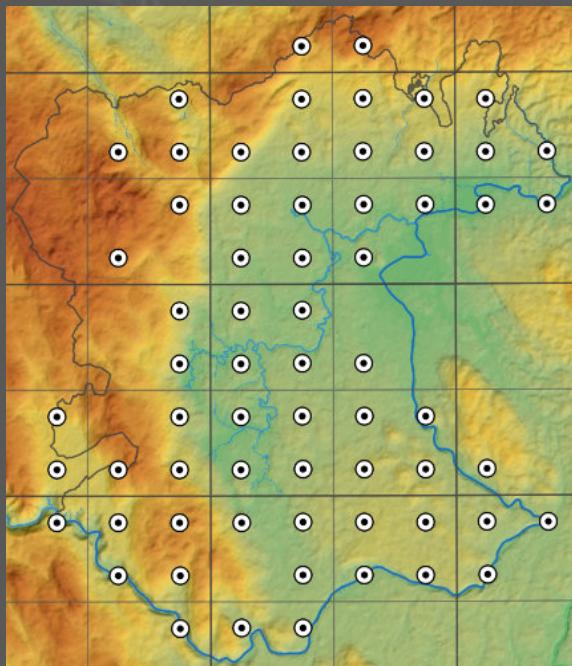
10-30 cm

Vezilja/Embroidereress: Verica Šikonja



Navadna kukavica je najpogostejša vrsta orhidej v Beli krajini. Raste na suhih negnojenih travnikih in se dokaj hitro naseli tudi na zapuščenih njivah. Spada med najbolj zgodnje cvetoče vrste orhidej in v glavnem cveti aprila. Zaradi njene pogostiosti je ena redkih vrst, ki je splošno bolj poznana med ljudmi v Beli krajini, o čemer pričajo njena ljudska imena, kot so »jurjevka« ali samo »kukavica«. V okolici Vinice pa o njej obstaja tudi rek: »Ne nosi je doma, ker ne bojo kokoši nesle.« Iz gomoljčkov na Balkanu in v Turčiji izdelujejo pijačo salep, zaradi česar je tam zelo ogrožena.

GREEN-WINGED ORCHID



The Green-winged Orchid is the most common species of orchid in Bela krajina. It grows in dry unfermented meadows and quickly spreads, even in abandoned fields. It is one of the earliest flowering species of orchid and mainly blooms in April. Because it is so abundant, it is one of the few species that is most commonly known by the people in Bela krajina, with names such as "jurjevka" or just "kukavica". In the vicinity of Vinica, there is also a saying about it: "Don't bring them home, because the chickens will stop laying." In the Balkans and Turkey, they still make a drink called Salep from the tubers, and because of this the orchid is endangered.

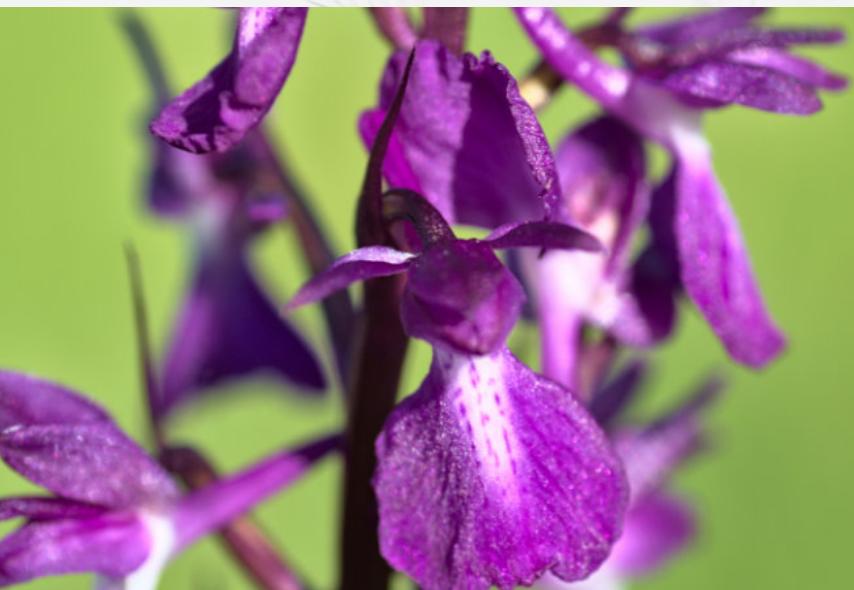


MOČVIRSKA KUKAVICA

Anacamptis palustris (Jacq.) R. M. Bateman, Pridgeon & M. W. Chase

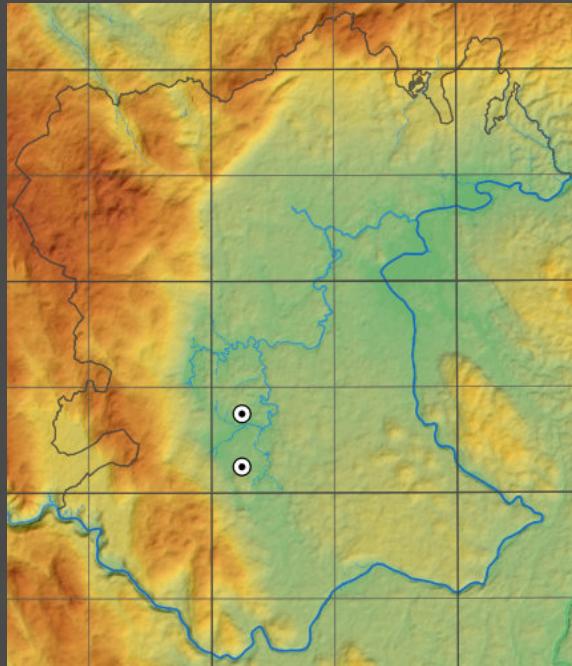


Vezilja/Embroidereress: Vida Mesarič



Močvirska kukavica zaradi svoje visoke rasti prevladuje med močvirskim rastjem in je skoraj ni mogoče zamenjati z nobeno drugo vrsto. Ker uspeva izključno na vlažnih rastiščih, je izredno ranljiva vrsta. Največjo nevarnost ji predstavlja izsuševanje njenega življenskega prostora. Danes pa je močvirska kukavica dodatno ogrožena tudi zaradi opuščanja redne košnje vlažnih travnikov. V Beli krajini uspeva skoraj izključno na mokriščih ob zgornjem toku reke Lahinje. Eno njenih najpomembnejših rastišč v Nerjaskih lugih vsako leto v začetku julija pokosijo na prireditvi »Pokosimo Nerajske luge« in s tem varujejo to rastišče ter opozarjajo na pomen tradicionalnega kmetijstva za ohranjanje biotske pestrosti podeželja.

MARSH ORCHID



Because of its height, the Marsh Orchid dominates the other marsh plants and cannot be mistaken for any other species. As it grows exclusively in moist habitats, it is an extremely vulnerable species. The biggest threat is the draining of its habitat. Today, the Marsh Orchid is addiRonally endangered due to the abandonment of the tradiRonal mowing of wet meadows. In Bela krajina, it grows almost exclusively in the wetlands along the upper course of the Lahnja river. One of its most important habitats in the Nerjaski lugi is mown every year at the beginning of July at the event "Pokosimo Nerajske luge" (Mowing the Nerajec Marshes), thus protecRng its habitat and drawing aRenRon to the importance of tradiRonal agriculture for preserving the biodiversity of the countryside.



METULJASTA KUKAVICA

Anacamptis papilionacea (L.) R.M. Bateman



IV-V



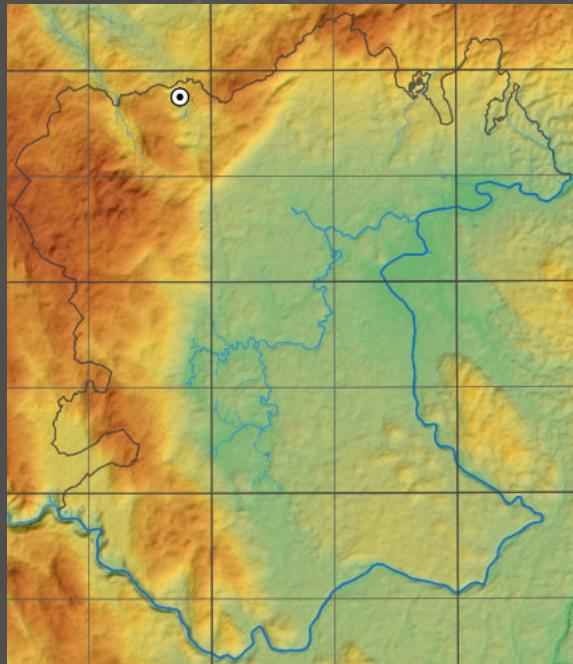
10-30 cm

Vezilja/Embroidereress: Antonija Dvojmoč



Metuljasta kukavica je bila še do pred nekaj leti poznana zgolj na Primorskem in v Istri ter je veljala za izključno (sub)mediteransko vrsto. V zadnjih letih so jo odkrili v okolici Trebnjega in na Goričkem. Leta 2020 pa je bila najdena tudi v Beli krajini nad vasjo Rožni dol. Ker cveti bolj zgodaj, je nižje rasti in se izredno rada križa z navadno kukavico (*A. morio*). Kljub svoji veliki raznolikosti (predvsem medena ustna lahko variira od temno vijolične do svetlo rožnate barve, posuta je lahko tudi s pikami), je prepoznavna vrsta in jo zaradi rahlega socvetja težje zamenjamo z npr. navadno kukavico.

PINK BUTTERFLY ORCHID



Until a few years ago, the Pink Butterfly Orchid was known only in the Primorska and Istria regions, and was considered an exclusive (sub) Mediterranean species. In recent years, it has been discovered in the vicinity of the town of Trebnje and in the Goričko region. In 2020, it was also found in Bela krajina above the village of Rožni dol. Because it blooms earlier, it is shorter and will often cross-pollinate with the Green-winged Orchid (*A. morio*). Despite its great diversity (especially the labellum which can vary from dark purple to light pink, and can also be speckled with dots), it is a recognisable species, and because it lacks inflorescence it is more difficult to distinguish from the Green-winged Orchid.



PIRAMIDASTI PILOVEC

Anacamptis pyramidalis (L.) Rich.



V-VI

20-60 cm

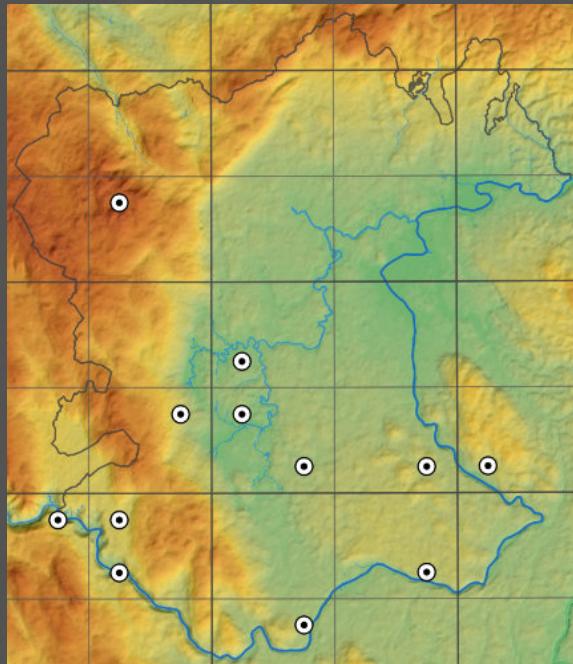
Vezilja/Embroidereress: Mira Madronič



Piramidasti pilovec je dobil ime po piramidasti obliki socvetja na začetku cvetenja, ki se kasneje spremeni v valjasto obliko. Barva cvetov je dokaj raznolika, od svetlo rdeče do temno vijolične. Oprševalce privablja z nektarjem, ki je lepo viden na dnu dolge ostroge. Običajno uspeva na topnih suhih travnikih, ob gozdnem robu in na travnikih, ki se zaraščajo. Rastišča v Beli krajini so redka. Tam, kjer uspeva, pa se lahko pojavlja v večjih populacijah.



PYRAMIDAL ORCHID



The Pyramidal Orchid is named after the pyramidal shape of the inflorescence at the start of the flowering season, which later changes into a cylindrical form. The colour of the flowers is quite varied, from light red to dark purple. It attracts pollinators with nectar, which is well seen at the bottom of the spur. It usually grows in warm and dry meadows, along the forest edges and in meadows which have started to become overgrown. The sites in Bela krajina where it grows are rare, but where it grows it can be in larger populations.



BLEDNA NAGLAVKA

Cephalanthera damasonium (Mill.) Druce



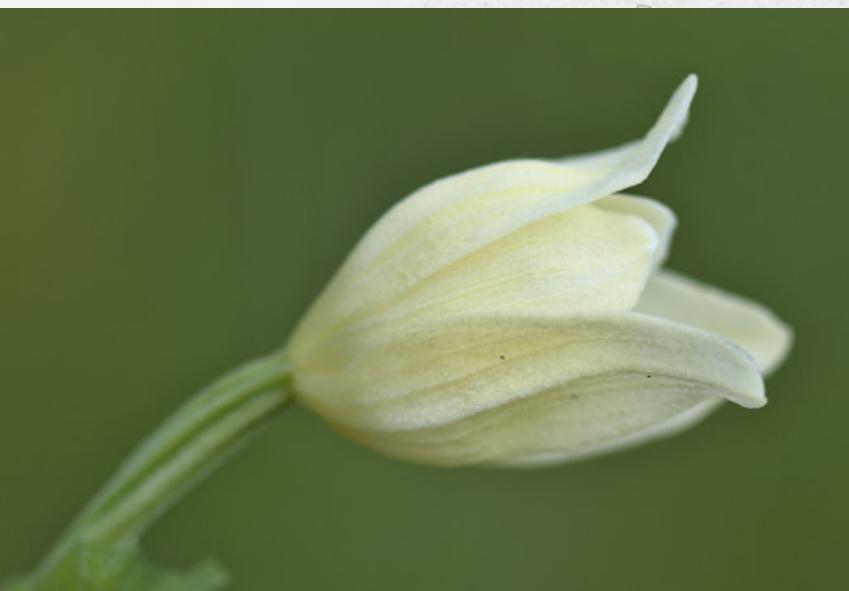
V-VI

20-60 cm

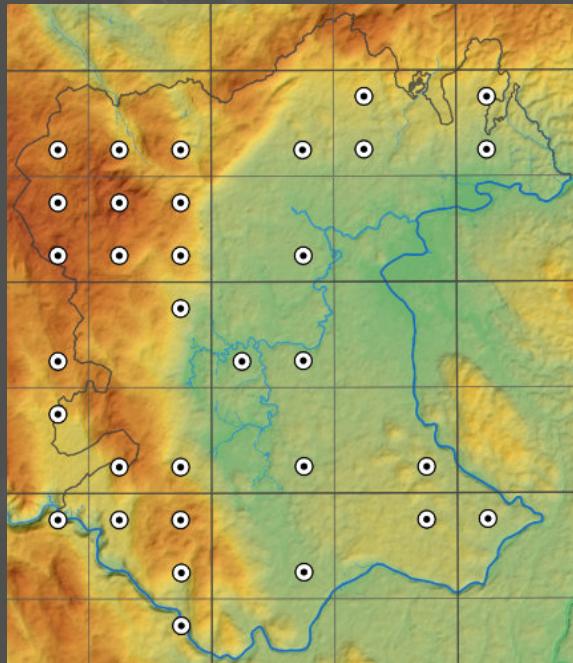
Vezilja/Embroidereress: Verica Šikonja



Bledna naglavka je podobna dolgolistni naglavki (*C. longifolia*), od katere pa se loči po ovalnih listih in nekoliko večjih rumenkastih cvetovih, ki imajo na medeni ustni podolgovate rumenkaste izrastke. Cvetovi se redko v celoti odprejo in zato redno prihaja do samooprašitve. Spada med pogoste vrste, ki uspevajo v gozdovih in na gozdnih robovih. V okolici Mirne gore so bile odkrite rastline brez klorofila, kar kaže na zelo tesno povezavo z okoliškimi rastlinami, ki jo oskrbujejo s hranili.



WHITE HELLEBORINE



The White Helleborine is similar to the Sword-leaved Helleborine (*C. longifolia*), from which it is distinguished by its oval leaves and slightly larger yellowish flowers, which have elongated yellowish growths on the labellum. The flowers rarely open completely and therefore self-pollination regularly occurs. It is one of the common species that grows in forests and on forest edges. Albino plants have been found in the vicinity of Mirna gora, indicating a very close relationship with the surrounding plants, which supply it with nutrients.



DOLGOLISTNA NAGLAVKA

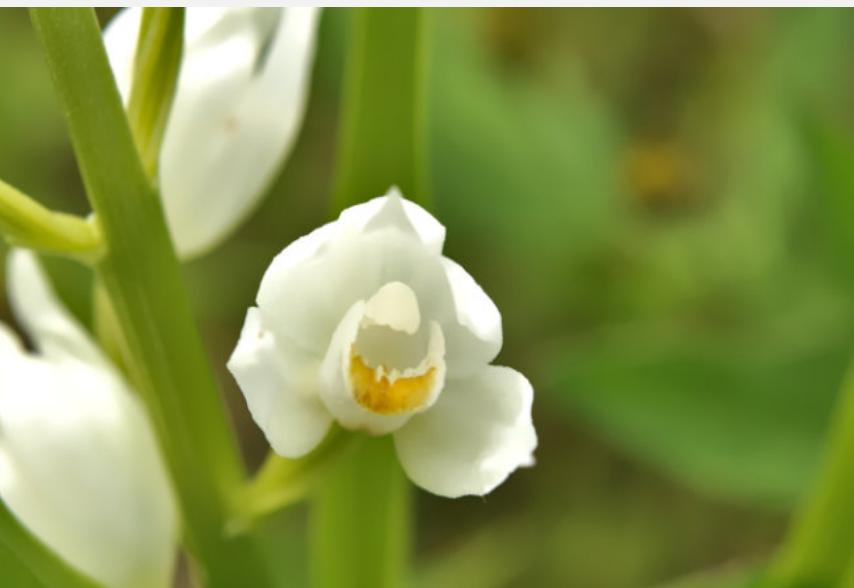
Cephalanthera longifolia (L.) Fritsch



IV-V

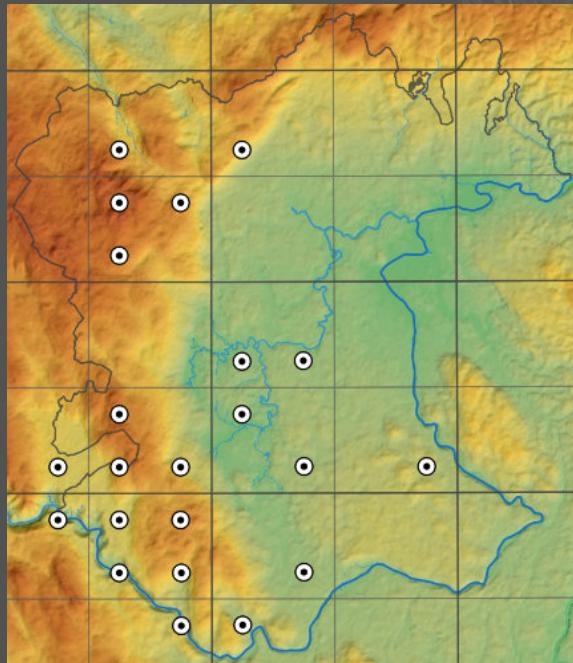
20-60 cm

Vezilja/Embroidereress: Anica Jesih



Dolgolistna naglavka je dobila ime po značilnih podolgovatih listih. V primerjavi z bledo naglavko (*C. damasonium*) je socvetje sestavljeno iz cvetov, ki so manjši in beli. Medena ustna ima, podobno kot pri bledi naglavki, podolgovate rumenkaste izrastke. Uspeva v gozdovih, na gozdnih robovih in tudi na travnikih, ki se zaraščajo.

SWORD-LEAVED HELLEBORINE



The Sword-leaved Helleborine is named after its characteristically elongated leaves. Compared to the White Helleborine (*C. damascenum*), its inflorescence consists of flowers that are smaller and white. The labellum has, similar to the White Helleborine, elongated yellowish growths. It grows in forests, on forest edges and also on overgrown meadows.



RDEČA NAGLAVKA

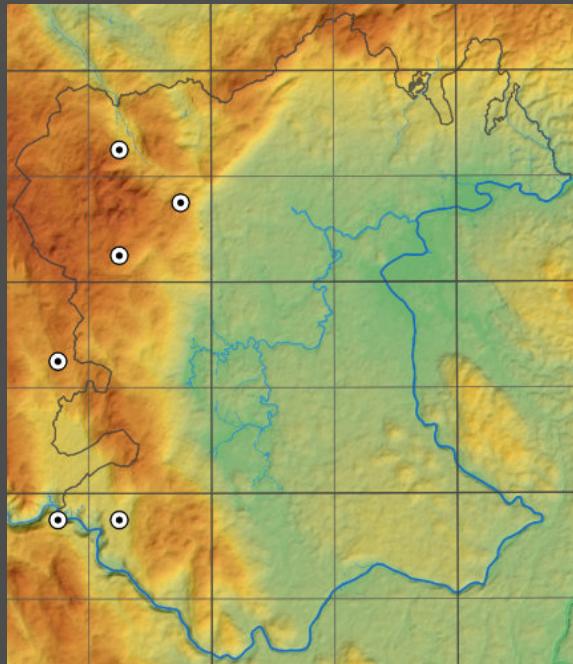
Cephalanthera rubra (L.) Rich.



Rdeča naglavka je ena od treh vrst iz rodu naglavk, ki uspevajo v Sloveniji. Od ostalih dveh vrst (bleda naglavka [*C. Damasonium*], dolgolistna naglavka [*C. longifolia*]) se loči po vijolično-rdečkasti barvi socvetja. To ni tipična travniška vrsta. Veliko pogosteje uspeva na toplih prisojnih gozdnih robovih, običajno posamično, redko v večjih populacijah. Za razliko od ostalih dveh vrst naglavk so cvetovi pri rdeči naglavki vedno lepo odprti in privabljajo opaševalce.



RED HELLEBORINE



The Red Helleborine is one of the three species of the genus *Cephalanthera* that grows in Slovenia. From the other two species, (White Helleborine, *[C. damsonium]*, Sword-leaved Helleborine *[C. longifolia]*), it is distinguished by the purple-reddish colour of the inflorescence. This is not a typical open meadow species. It generally grows on the warm, sunny sides of the forest edges, usually on its own, and rarely in large populations. Unlike the other two types of the genus *Cephalanthera*, the flowers of the Red Helleborine are always open and attract pollinators.



MESNORDEČA PRSTASTA KUKAVICA

Dactylorhiza incarnata (L.) Soó



V-VI

20-70 cm

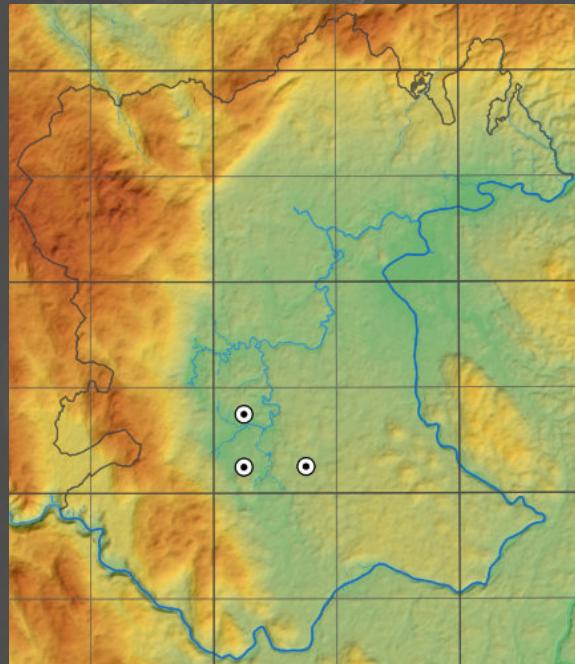
Vezilja/Embroidereress: Tatjana Žlak



Mesnordeča prstasta kukavica je vrsta, ki je dobila ime po mesno rdečih do rožnato rdečih cvetovih. Vrsta lahko uspeva skupaj s podobno majsko prstasto kukavico (*D. majalis*), od katere se loči po cvetovih, ki so manjši in manj intenzivne barve, ter po suličastih listih, ki nimajo temnih peg. Uspeva na mokriščih in vlažnih travnikih ob zgornjem toku reke Lahinje in ni pogosta vrsta.



EARLY MARSH ORCHID



The fleshy red Early Marsh Orchid is a species named after the fleshy red to pinkish red flowers. The species can grow together with a similar Broad-leaved Marsh Orchid (*D. majalis*), from which it is distinguished by flowers that are smaller and less intense in colour, and by lanceolate leaves that do not have dark spots. It grows in wetlands and wet meadows along the upper reaches of the Lahnja river and is not a common species.



FUCHSOVA PRASTA KUKAVICA

*Dactylorhiza maculata subsp. *Fuchsii* (Druce) Hyl.*



V-VI

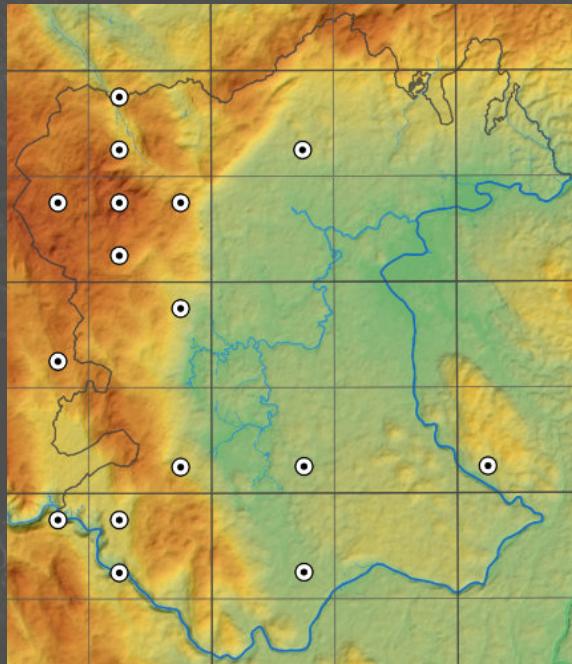
20-70 cm

Vezilja/Embroidereress: Sonja Šuster



Fuchsova prstasta kukavica spada v rod prstastih kukavic, ki imajo korenine v obliki prstov. Je pogosta vrsta, ki uspeva v velikih populacijah in ni uvrščena na rdeči seznam ogroženih rastlinskih vrst Slovenije. Krasijo jo izredno lepa socvetja z zelo raznolikimi vijoličnimi vzorci cvetov in značilni listi, ki so posuti s temnimi pegami. Uspeva v gozdu in na gozdnem robu ter na vlažnih travnikih.

COMMON SPOTTED ORCHID



The Common Spotted Orchid belongs to the genus of *Dactylorhiza* which has finger-shaped roots. It is a common species that grows in large populations and is not included in the red list of endangered plant species in Slovenia. It is famous for its beautiful inflorescence with very diverse purple flower patterns and characteristic leaves, speckled with dark spots. It grows in the forest, on the forest edge, and in wet meadows.



TRANSILVANSKA PRSTASTA KUKAVICA

*Dactylorhiza maculata subsp. *Transsilvanica* (Schur) Soó*



VI

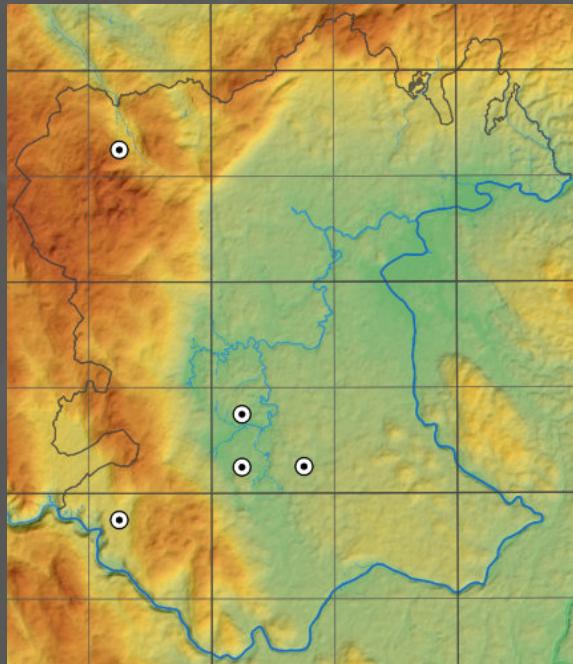
30-70 cm

Vezilja/Embroidereress: Antonija Dvojmoč



Popolnoma beli cvetovi in listi brez temnih peg so glavna značilnost transilvanske prstaste kukavice. Znotraj velikih populacij se redno pojavljajo tudi rastline z rožnatimi cvetovi, ki lahko spominjajo tudi na Fuchsovo prstasto kukavico (*D. maculata subsp. Fuchsii*). Transilvanska prstasta kukavica je redka vrsta, ki uspeva v južnem delu Slovenije, na vlažnih, negnojenih, pogosto tudi zaraščajočih se travnikih, velikokrat tudi na steljnikih. V Beli krajini uspeva v nekaj velikih populacijah, v osrednjem nižinskem delu ob reki Lahnji in v okolici Radencev.

TRANSYLVANIAN HEATH SPOTTED ORCHID



Completely white flowers and leaves without dark spots are the main characteristics of the Transylvanian Heath Spotted Orchid. Plants with pink flowers, which may also resemble the Common Spotted Orchid (*D. maculata* subsp. *Fuchsii*), also appear regularly within large populations. The Transylvanian Heath Spotted Orchid is a rare species that grows in the southern part of Slovenia on moist, unferalized, usually overgrown meadows, and often on fern fields. It grows in Bela krajina in a few large populations, in the central lowland part along the Lahinja river and in the vicinity of the village of Radenci.



BEZGOVA PRSTASTA KUKAVICA

Dactylorhiza sambucina (L.) Soó



IV-V

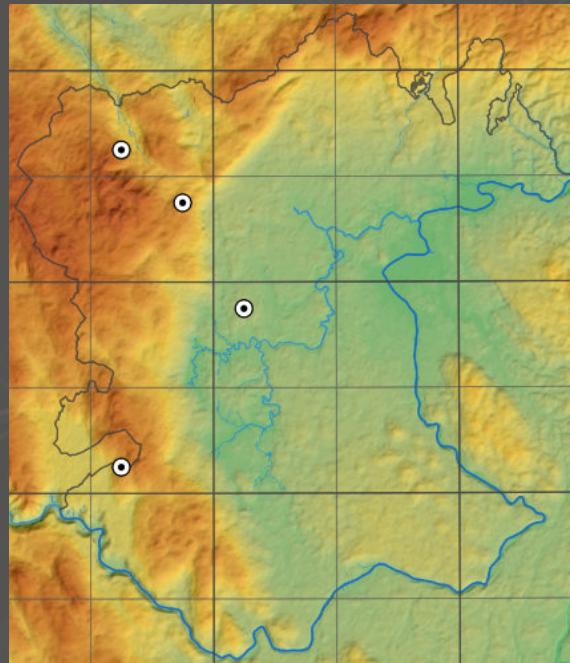
10-30 cm

Vezilja/Embroidereress: Vida Mesarič



Bezgova prstasta kukavica je v Sloveniji edina orhideja, ki cveti v dveh različnih barvah znotraj iste populacije. Vijolični ali rumeni cvetovi oprševalce privabljajo z rahlim vonjem po bezgu, po katerem je vrsta dobila ime. Oprševalcev ne nagradi z nektarjem, zato podobno kot nekatere druge vrste orhidej spada v skupino t. i. prevarantskih vrst. Raste na gozdnih jasah in na suhih negnojenih travnikih, večinoma v večjih populacijah.

ELDER-FLOWERED ORCHID



The Elder-flowered Orchid is the only type of orchid in Slovenia that flowers in two different colours within the same population. Purple or yellow flowers attract pollinators with the faint scent of elderflower, after which the species gets its name. It does not reward pollinators with nectar, and like some other types of orchid, it belongs to the group of so-called *deceitful* species. It grows in forest clearings and on dry unferalised meadows, mostly in large populations.



ZELENI VOLČJI JEZIK

Dactylorhiza viridis (L.) R. M. Bateman, Pridgeon & M. W. Chase



V-VI

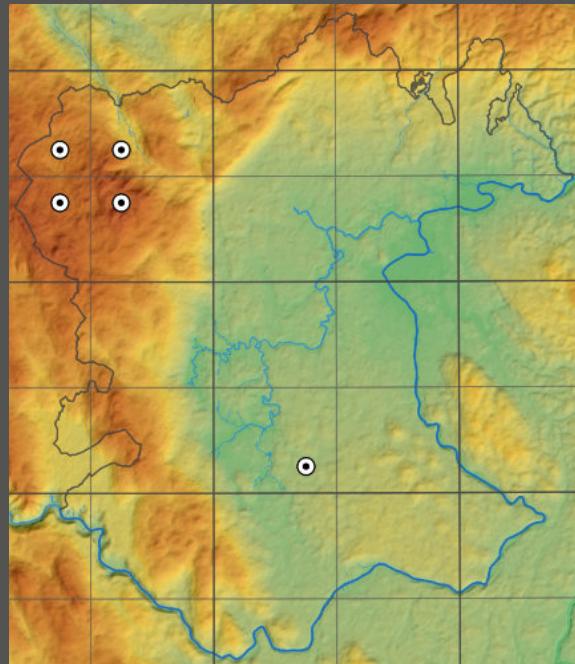
10-30 cm

Vezilja/Embroidereress: Sonja Šuster



Zeleni volčji jezik je nevpadljiva vrsta, ki je ne moremo zamenjati z nobeno drugo vrsto. Medena ustna je največkrat zelena, redko pa lahko tudi popolnoma vijolična. Orhideja, tako kot drugod po Sloveniji, uspeva na višje ležečih zakisanih pustih travnikih. Dokaj pogosta je v okolici Gač, Ponikev in Rese (nadmorska višina nad 700 metrov). Zelo zanimivo je vlažno rastišče pri izviru Lahinje na zgolj 150 metrov nadmorske višine. Tam so bili najdeni tudi križanci (*Dactyloglossum*) med zelenim volčjim jezikom (*D. viridis*) in prstasto kukavico (*Dactylorhiza sp.*), ki so bistveno višji od zelenega volčjega jezika (80 cm) in imajo oba notranja cvetna lista razprta.

FROG ORCHID



The Frog Orchid is an inconspicuous species that cannot be mistaken for any other. Its labellum is mostly green, but occasionally it can be completely purple. The orchid, as elsewhere in Slovenia, grows in higher, acidic, infernal meadows. It is quite common in the vicinity of the former villages of Gače, Ponikve and Resa (with an altitude of over 700 metres). The wetland at the source of the river Lahinja, at only 150 metres above sea level, is very interesting. There, hybrids (*Dactylorhizum*) between the Frog Orchid (*D. viridis*) and another species of the *Dactylorhiza* genus have also been found which are significantly taller than the Frog Orchid (80 cm) and have both inner petals open.



TEMNORDEČA MOČVIRNICA

Epipactis atrorubens (Hoffm. Ex Bernh.) Besser



VI-VII



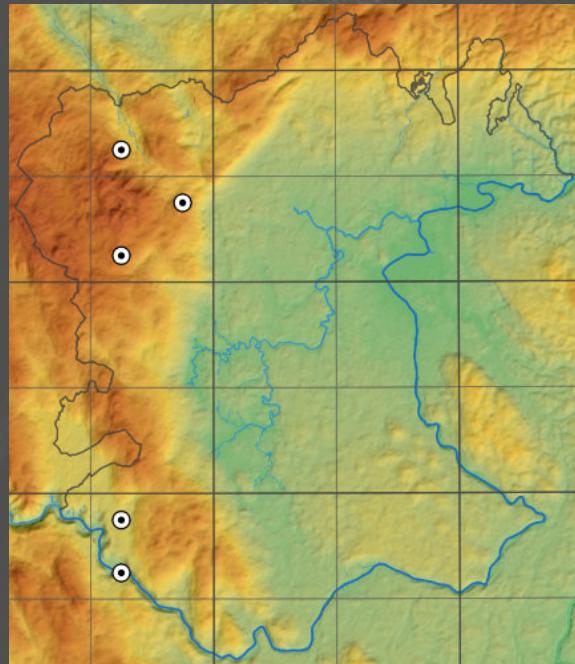
20-80 cm

Vezilja/Embroidereress: Marija Žunič



Temnordeča močvirnica spada v številčno velik rod močvirnic, od katerih v Sloveniji samo dve vrsti uspevata na vlažnih rastiščih (*E. palustris* in *E. nordeniorum*). Vse ostale močvirnice, tudi temnordeča, rastejo v gozdu ali na gozdnem robu (zelo pogosta je ob gozdnih cestah). Od ostalih vrst močvirnic jo je dokaj enostavno ločiti po rdečkastem cvetu in zgodnejšem času cvetenja. Podobno kot drugod po Sloveniji je tudi v Beli krajini pogosta vrsta.

DARK-RED HELLEBORINE



The Dark-red Helleborine belongs to a numerically large genus of helleborine, of which only two species grow in wetlands (*E. palustris* and *E. nordeniorum*) in Slovenia. All other helleborines, including the Dark-red Helleborine, grow in the forest or on the forest edges (it is very common along forest tracks). It is quite easy to distinguish from other species of helleborine by its reddish flower and earlier flowering season. As elsewhere in Slovenia, it is also a common species in Bela krajina.



GREUTERJEVA MOČVIRNICA

Epipactis greuteri H. Baumann & Künkele



VII-VIII



20-80 cm

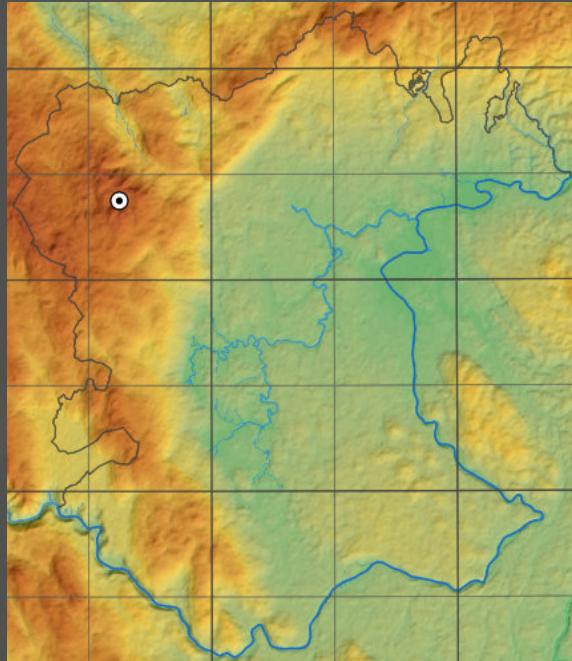


Vezilja/Embroidereress: Tatjana Žlak



Greuterjeva močvircna je najbolj pozno cvetoča vrsta iz rodu močvircnic. Uspeva v jelovo-bukovih gozdovih na višjih legah. Od ostalih močvircnic se loči po zelenih do svetlo zelenih cvetnih listih in po stebelnih listih, ki so v primerjavi s širokolistno močvircno [*E. Helleborine*] bolj podolgovati (jajčasto suličasti). Cvetovi se redko popolnoma odprejo in so viseči. V Beli krajini je redka vrsta, ki uspeva v okolici Mirne gore.

GREUTER'S HELLEBORINE



The Greuter's Helleborine is the latest flowering species of helleborine. It grows in fir and beech forests at higher altitudes. It is distinguished from other helleborines by its green to light green petals, and by its stem leaves, which are more elongated (ovoid-lanceolate) compared to the Broad-leaved Helleborine [*E. Helleborine*]. The flowers rarely open completely and hang down. It is a rare species in Bela krajina, as it only grows in the vicinity of Mirna gora.



ŠIROKOLISTNA MOČVIRNICA

Epipactis helleborine (L.) Crantz



VI-VII

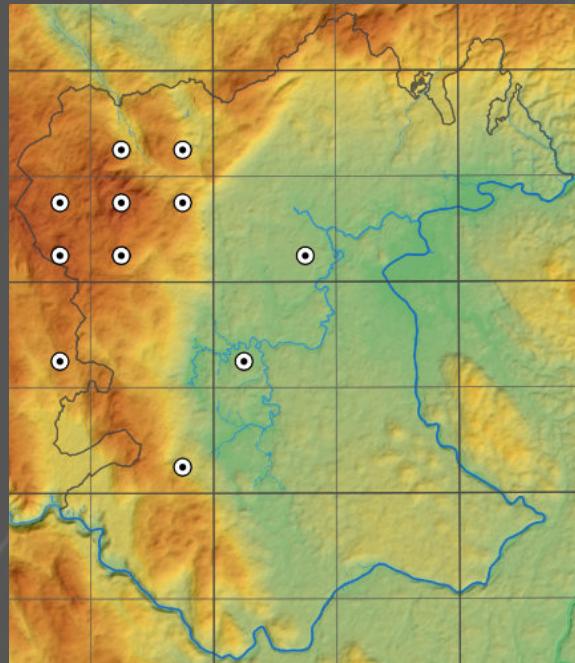
30-80 cm

Vezilja/Embroidereress: Antonija Dvojmoč



Širokolistna močvirnica je najpogosteša vrsta v rodu močvirnic (*Helleborine*). Rastlina je splošno razširjena v gozdovih in na gozdnih robovih. V Severni Ameriki jo obravnavajo kot invazivno vrsto. Zaradi svoje višine je ena najbolj vpadljivih vrst orhidej pri nas. Večina listov je velikih in jajčastih, nekateri pa so široko suličasti. Cvetovi so barvno zelo spremenljivi in sestavljajo velika socvetja. Vrsta je izredno spremenljiva in se zelo rada križa z drugimi vrstami iz rodu močvirnic. V Beli krajini uspeva v osrednjem delu, najpogosteša pa je v zahodnem delu.

BROAD-LEAVED HELLEBORINE



The Broad-leaved Helleborine is the most common species of the *Helleborine* genus. The plant is widespread in forests and on forest edges. In North America, it is considered an invasive species. Due to its height, it is one of the most striking species of orchid in our country. Most of the leaves are large and ovate, and some are broadly lanceolate. The flowers have many varieties of colour and form large inflorescences. The species is extremely variable and will cross-pollinate with other species of helleborine. It grows in the central part of Bela krajina, but is most common in the west.



KRATKOLISTNA MOČVIRNICA

*Epipactis helleborine (L.) subsp. *Orbicularis* (K. Richt.) E. Klein*



VI-VII



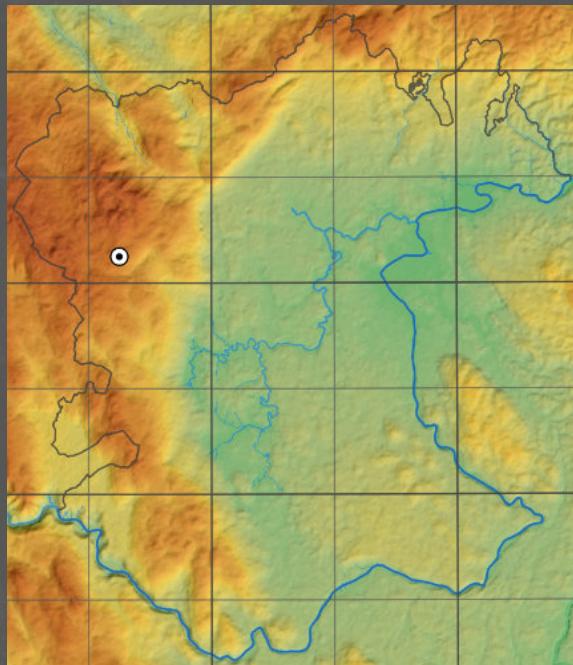
30-80 cm

Vezilja/Embroidereress: Antonija Dvojmoč



Kratkolistna močvirnica je zelo podobna širokolistni močvirnici (*E. helleborine*) in tudi uspeva na istih rastiščih. Od nje se loči predvsem po obliki stebelnih listov, ki so zaokroženi in izrazito obrnjeni navzgor ter po dva tedna zgodnejšem cvetenju. Mnogi botaniki jo uvrščajo v podvrsto širokolistne močvirnice. Do sedaj je bilo najdeno samo eno rastišče v gozdovih v okolici Mirne gore.

ORBICULAR BROAD-LEAVED HELLEBORINE



The Orbicular Broad-leaved Helleborine is very similar to the Broad-leaved Helleborine (*E. helleborine*) and it also grows in the same habitats. It differs from it mainly by the shape of the leaves on the stem which are rounded and markedly turned upwards. It also flowers two weeks earlier. Many botanists classify it as a subspecies of the Broad-leaved Helleborine. Up to now only one habitat has been found in the forests around Mirna gora.



OZKOUTNA MOČVIRNICA

Epipactis leptochila (Godfery) Godfery



VII-VIII

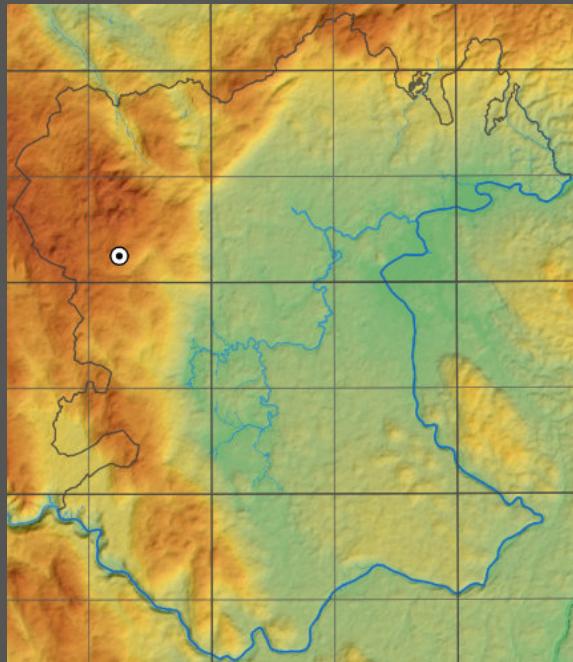
20-70 cm

Vezilja/Embroidereress: Tatjana Žlak



Ozkoustna močvirnica je dobila ime po ozkem in dolgem prednjem režnju medene ustne. Prehod med sprednjim in zadnjim režnjem medene ustne je izrazito ozek. Cvetovi so na zunanjih delih rumenkasti, v notranjosti pa rumenkasto zeleni. Uspeva v senčnih, višje ležečih bukovih gozdovih. V Sloveniji je redka vrsta. V Beli krajini pa je bila najdena samo na rastišču v okolici Mirne gore.

NARROW-LIPPED HELLEBORINE

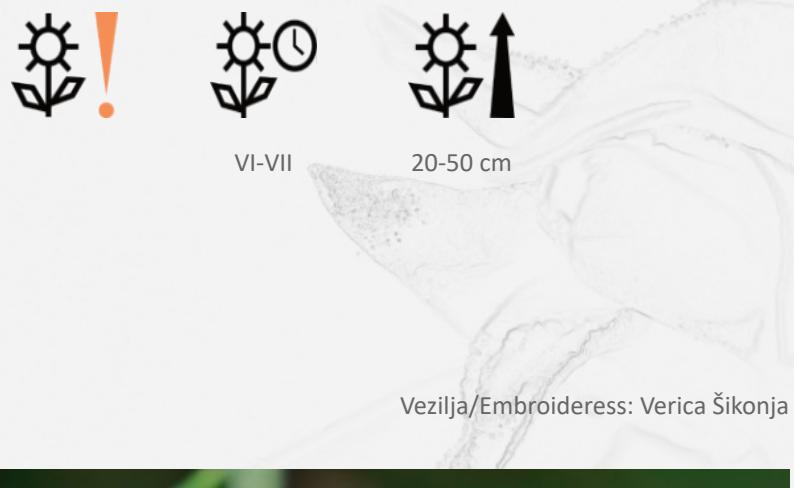


The Narrow-lipped Helleborine is named after the narrow and long front lobe of the labellum. The transition between the front and back lobes of the labellum is markedly narrow. The flowers are yellowish on the outside and yellowish green on the inside. It grows in shady, higher-lying beech forests. It is a rare species in Slovenia. In Bela krajina, however, it has been found only on one habitat in the vicinity of Mirna gora.



PREZRTA MOČVIRNICA

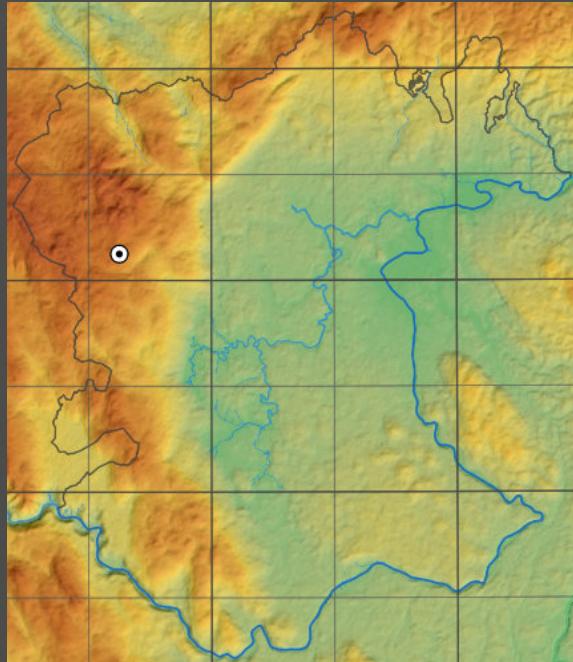
*Epipactis leptochila (Godfery) Godfery subsp. *Neglecta*
Kümpel*



Ime prezrte močvirnice nakazuje na to, da je bila vrsta v preteklosti prezrta in v senci njene bolj poznane sorodnice ozkoustne močvirnice (*E. leptochila*). Prezrta močvirnica ji je namreč zelo podobna, le da ima večje in bolj barvite cvetove ter daljši prednji reženj medene ustne, ki je pogosto nesimetrično ukrivljen. V glavnem cveti nekoliko pred ozkoustno močvirnico v senčnih bukovih gozdovih na višji nadmorski višini. V Sloveniji je redka vrsta, v Beli krajini uspeva samo na rastišču v okolici Mirne gore.



NARROW-LIPPED NEGLECTED HELLEBORINE



The name of the Narrow-lipped Neglected Helleborine indicates that the species has been ignored in the past, and overlooked in favour of its more popular relative the Narrow-lipped Helleborine (*E. leptochila*). The Narrow-lipped Neglected Helleborine is very similar to it, except that it has larger and more colourful flowers and a longer front lobe of the labellum, which is often asymmetrically curved. It mainly flowers a little earlier than the Narrow-lipped Helleborine in shady beech forests at higher altitudes. It is a rare species in Slovenia, and in Bela krajina it grows only in the vicinity of Mirna gora.



DROBNOLISTNA MOČVIRNICA

Epipactis microphylla (Ehrh.) Sw.



VI-VII

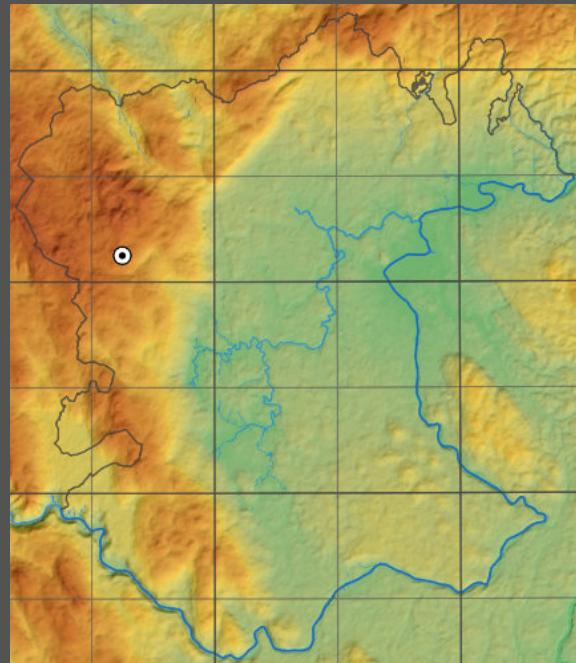
15-40 cm

Vezilja/Embroidereress: Marija Marušič



Drobnolistna močvirnica je dobila ime po izredno majhnih podolgovatih stebelnih listih. Zvonasti cvetovi so v socvetju redko razporejeni in obrnjeni na eno stran. Običajno so zaprti, redko se odprejo v celoti. Rastlina je edina iz rodu močvirnic, ki diši po vanilji ter s tem privablja opráševalce. Uspeva v senčnih gozdovih v okolici Mirne gore.

SMALL-LEAVED HELLEBORINE



The Small-leaved Helleborine is named after the extremely small elongated leaves on the stem. The bell-shaped flowers are sparsely arranged on the inflorescence and are all on one side. They are usually closed, rarely opening completely.

The plant is the only one from the genus of helleborine that smells of vanilla and thus attracts pollinators. It grows in the shady forests around Mirna gora.



MÜLLERJEVA MOČVIRNICA

Epipactis muelleri Godfery



VI

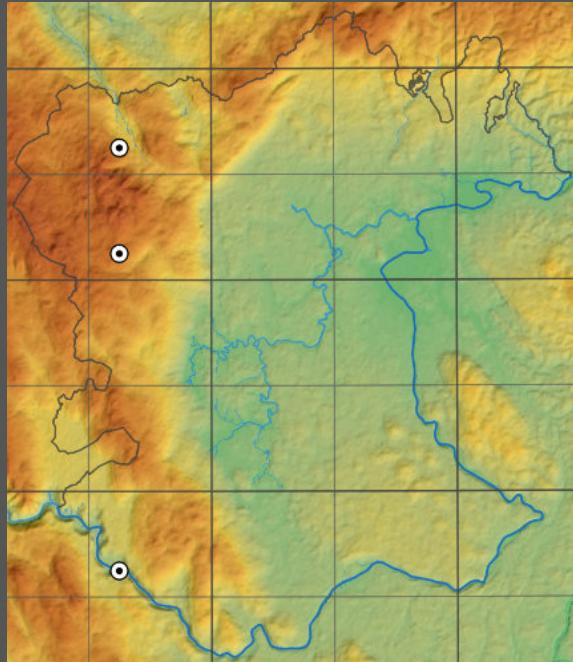
20-90 cm

Vezilja/Embroidereress: Maja Madronič



Müllerjeva močvirnica je podobna širokolistni močvirnici (*E. helleborine*). Od nje se loči po stebelnih listih, ki niso jajčasti, temveč koničasti. Tudi barva cveta je običajno bolj zelenkasto rumenih odtenkov. Je toploljubna vrsta, ki uspeva na gozdnih robovih in v svetlih gozdovih. V Beli krajini je bila najdena v zahodnem gozdnatem delu.

MÜLLER'S HELLEBORINE



The Müller's Helleborine is similar to the Broad-leaved Helleborine (*E. helleborine*). It is distinguished from it by the leaves on the stem which are not ovate, but pointed. The colour of the flower is also usually more greenish yellow in shade. It is a species that loves the warmth and grows on forest edges and in light-filled forests with few trees. It has been found in the western forested part of Bela krajina.



NAVADNA MOČVIRNICA

Epipactis palustris (L.) Crantz



VI-VII



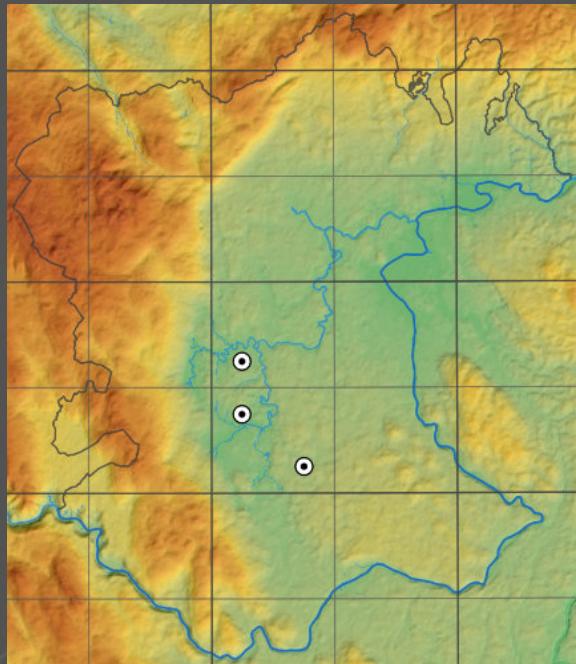
20-60 cm

Vezilja/Embroidereress: Vida Mesarič



Navadna močvircica je ena od dveh vrst močvirnic, ki uspevata na vlažnih rastiščih. Od ostalih močvirnic jo zelo enostavno ločimo po beli barvi medene ustne, ki ima rumenkaste izrastke ob prehodu prednjega v zadnji reženj. V Beli krajini je bila najdena samo na širšem območju reke Lahnje, kjer je lahko na določenih rastiščih zelo številčna.

MARSH HELLEBORINE



The Marsh Helleborine is one of two types of helleborine that grows in moist habitats. It is very easy to distinguish from other helleborines by the white colour of the labellum, which has yellowish growths at the transition from the anterior to the posterior lobe. In Bela krajina, it has been found only in the wider area of the river Lahinja, where it can be very numerous in certain habitats.



PONTSKA MOČVIRNICA

Epipactis pontica Taubenheim



VII-VIII

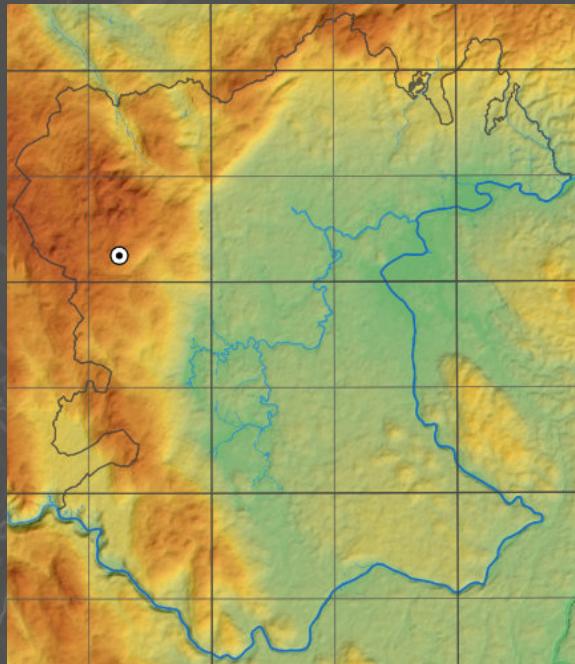
15-30 cm

Vezilja/Embroidereress: Antonija Dvojmoč



Pontska močvirnica je bila prvič najdena in opisana ob Črnem morju v pokrajini Pont (Turčija), zato je bila po njej tudi poimenovana. Je ena najmanjših predstavnic iz rodu močvirnic. Navadno ima štiri stebelne liste, od katerih je spodnji okroglast, sledijo pa podolgovati navadno svetlo zeleni listi. Cvetovi so zelenkasti in večinoma ne popolnoma odprtji. Pontska močvirnica raste v bukovih gozdovih in je redka vrsta, ki je bila do sedaj najdena samo v okolici Mirne gore, raste pa tudi na bližnjih Gorjancih.

PONTIC HELLEBORINE



The PonRc Helleborine was first found and described along the Black Sea in the province of Pontus in Turkey, and therefore it was named aQer it. It is one of the smallest representatives of the marsh genus. It usually has four leaves on the stem, the lower is round and is followed by elongated, usually light green leaves. The flowers are greenish and mostly not completely open. The PonRc Helleborine grows in beech forests, and is a rare species. So far it has been found only in the vicinity of Mirna gora . It also grows in the nearby Gorjanci.



PURPURNA MOČVIRNICA

Epipactis purpurata Sm.



VII-VIII

20-80 cm

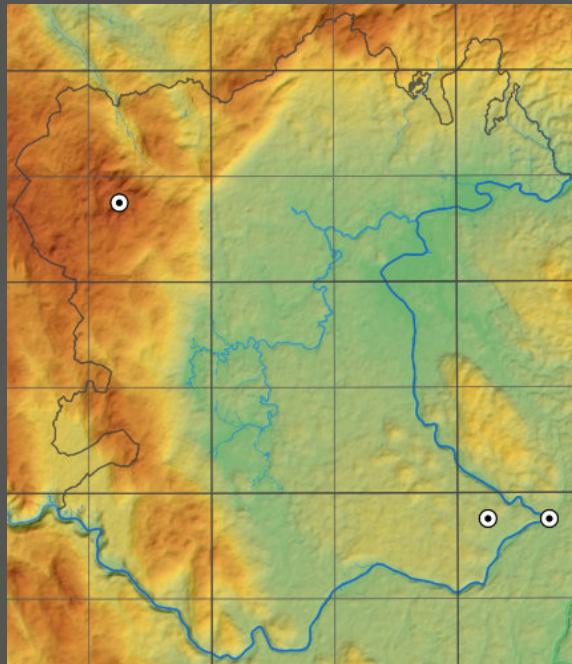


Vezilja/Embroidereress: Tatjana Žlak



Purpurna močvirnica je skupaj z Greuterjevo močvirnico (*E. greuteri*) naša najbolj pozno cvetoča vrsta močvirnic. Kot pove ime, je posebej na mladih rastlinah prevladujoča vijolična barva stebla in listov, kar jo loči od vseh ostalih močvirnic. Cvetni listi so po zunanjosti zeleni, v notranjosti pa zelenkasto beli ali rumenkasto zeleni. V Sloveniji ni preveč pogosta vrsta. V Beli krajini je bila, za razliko od večine ostalih močvirnic, najdena v Krajinskem parku Kolpa v okolici vasi Miliči in Mirne gore.

VIOLET HELLEBORINE



The Violet Helleborine, together with the Greuter's Helleborine (*E. greuteri*), are the latest flowering species of helleborine. As the name suggests, the purple colour of the stems and leaves is predominant, especially on young plants, which separates it from all other helleborines. The petals are green on the upper side and greenish white or yellowish green on the underside. It is not a very common species in Slovenia. In Bela krajina, unlike most other helleborines, it has been found in the Kolpa Regional Park near the village of Milići and in the vicinity of Mirna gora.



NAVADNI KUKOVIČNIK

Gymnadenia conopsea (L.) R. Br.

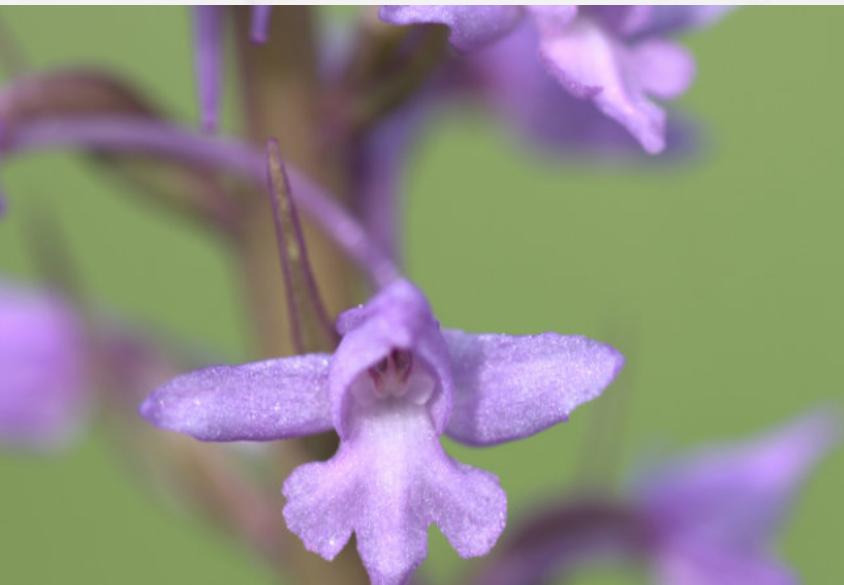


V

20-60 cm

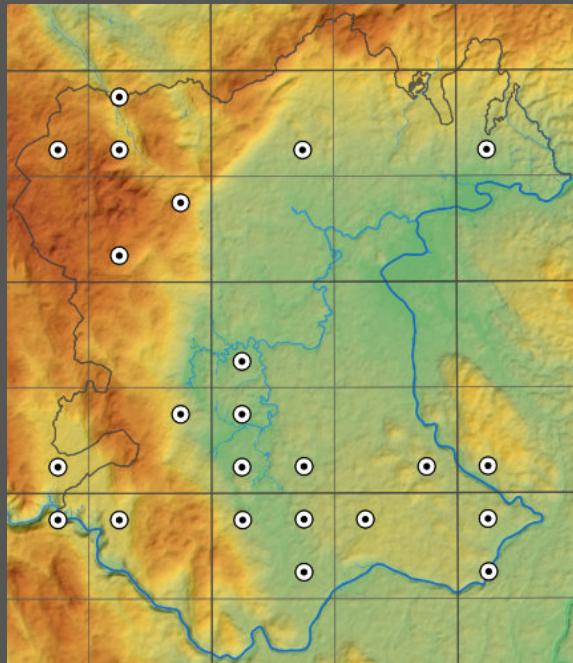


Vezilja/Embroidereress: Antonija Zvonka Šterbenc



Navadni kukovičnik uspeva na suhih negnojenih travnikih. Zamenjamo ga lahko z dehtečim kukavičnikom (*G. odoratissima*). Ločita se po barvi cvetov in dolžini ostroge. Ostroga je pri dehtečem kukovičniku kratka, največ tako dolga kot plodnica, pri navadnem kukavičniku pa je bistveno daljša, cvetovi pa so pri navadnem kukovičniku temnejši. Na koncu ostroge je prisoten nektar, ki je nagrada opraševalcem z dovolj dolgimi sesalnimi organi (predvsem metuljem). Tudi v Beli krajini je ustreznih travnikov za uspevanje kukovičnikov predvsem zaradi opuščanja kmetovanja vse manj.

FRAGRANT ORCHID



The Fragrant Orchid thrives in dry unfertilised meadows. It can be mistaken for the Short-spurred Fragrant Orchid (*G. odontostigma*). They are distinguished by the colour of the flowers and the length of the spur. The spur of the Short-spurred Fragrant Orchid is short and often as long as the petals, but in the Fragrant Orchid it is significantly longer, and the flowers are darker. At the end of the spur there is nectar, which is a reward for pollinators with sufficiently long proboscises (especially butterflies). In Bela krajina, too, there are fewer suitable meadows where the Fragrant Orchids grow, mainly because of the abandonment of farming.



GOSTOCVETNI KUKOVIČNIK

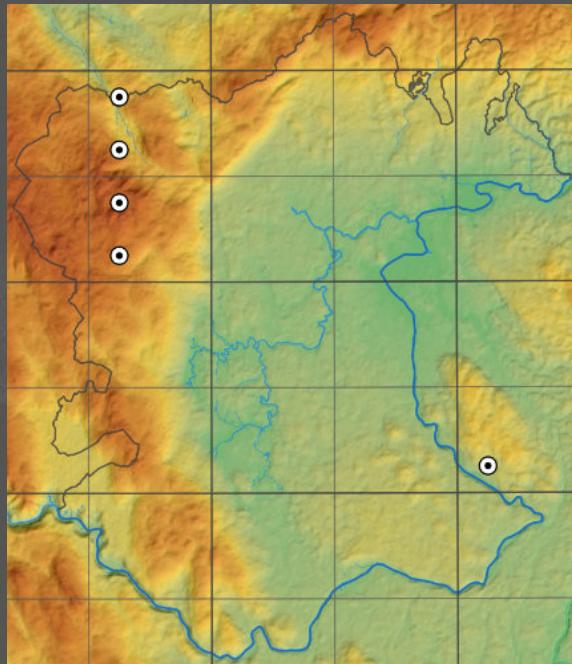
*Gymnadenia conopsea subsp. *Densiflora* (Wahlenb.) K. Richt*



Gostocvetni kukovičnik je podvrsta navadnega kukovičnika (*G. conopsea*), od katerega se loči po velikosti, saj je lahko visok tudi do 1 metro. Ima bolj temno vijolične cvetove in bistveno večje število cvetov v socvetju (tudi do 150 cvetov). Cveti pozneje kot navadni kukovičnik in ima vonj po nageljnih. Zaradi pomanjkanja ustreznih habitatov v Beli krajini ni pogosta vrsta.



DENSE-FLOWERED FRAGRANT ORCHID



The Dense-flowered Fragrant Orchid is a subspecies of the Fragrant Orchid (*G. conopsea*), from which it differs in size, as it can be up to one metre high. It has darker purple flowers and a significantly higher number of them in the inflorescence (up to 150). It blooms later than the Fragrant Orchid and smells like cloves. Due to the lack of suitable habitats in Bela krajina, it is not a common species.



DEHTEČI KUKOVIČNIK

Gymnadenia odoratissima (L.) Rich.



VI

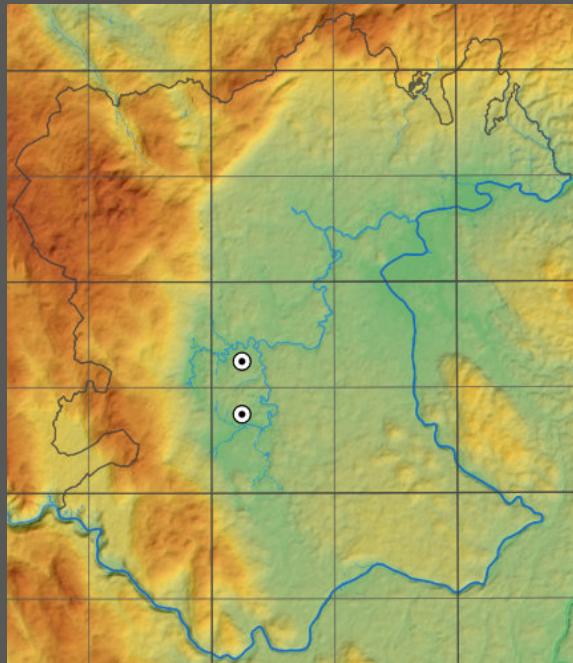
10-30 cm

Vezilja/Embroidereress: Tatjana Jakofčič



Najznačilnejša lastnost dehtečega kukovičnika v primerjavi z navadnim kukovičnikom (*G. conopsea*), je njegov izrazit vonj, ki spominja na vonj murk (rod *Nigritella*). Cvetovi so svetlejših odtenkov in imajo bistveno krajšo ostrugo ter bistveno manj trokrpo medeno ustno. V Sloveniji uspeva na gorskih travnikih, v nižinah pa redko, in sicer na vlažnih rastiščih. V Beli krajini je bila vrsta najdena samo na nekaj rastiščih med Kanižarico in Zorenci.

SHORT-SPURRED FRAGRANT ORCHID



The most characteristic feature of the Short-spurred Fragrant Orchid, when compared to the Fragrant Orchid (*G. conopsea*), is its fragrance, reminiscent of the smell of vanilla orchids (genus *Nigritella*). The flowers are lighter shades and have a significantly shorter spur and not such a distinctly three-parted labellum. In Slovenia it grows in mountain meadows, but rarely in the lowlands, particularly in moist habitats. In Bela krajina the species has been found only in a few habitats between the villages of Kanižarica and Zorenci.



JADRANSKA SMRDLJIVA KUKAVICA

Himantoglossum adriaticum H. Baumann



V-VI



20-100 cm

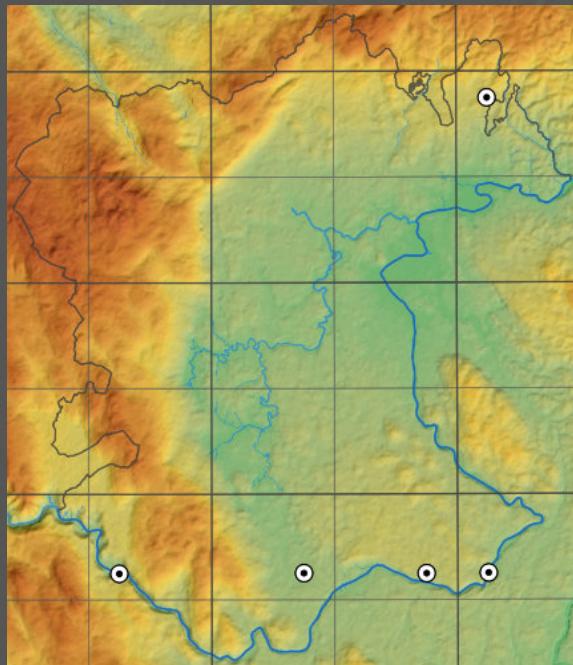


Vezilja/Embroidereress: Antonija Dvojmoč



Jadranska smrdljiva kukavica je visoka vrsta, saj lahko zraste tudi do enega metra. Uspeva na zelo topnih območjih, posebej na Primorskem. V celinski Sloveniji uspeva zelo poredko, v glavnem na površinah, ki so se začele zaraščati (travniki, vinogradi, travniški sadovnjaki). V Beli krajini je bila najdena na sedmih rastiščih, čeprav je izredno redka vrsta. Jadranska smrdljiva kukavica je indikatorska vrsta za območja Natura 2000 in zanimivo je, da se le eno od sedmih rastišč (Radenci) nahaja znotraj območja Natura 2000. Cvetovi imajo rahel vonj po kozah (na Hrvaškem to vrsto imenujejo »kozonoša«) in izredno dolgo medeno ustno, po kateri je dobila latinsko ime.

ADRIATIC LIZARD ORCHID



The AdriaRc Lizard Orchid is a tall species, as it can grow up to one metre high. It grows in very warm areas, especially in the Primorska region. It grows very rarely in the middle of Slovenia, mainly in areas that have become overgrown (ie meadows, vineyards, and meadow orchards). Although it is an extremely rare species, it has been found in seven habitats in Bela krajina. It is interesRng that only one of the seven habitats near the village of Radenci is located within the Natura 2000 area. It has an extremely long labellum, aQer which it also gets its LaRn name. The flowers smell slightly of goat and in CroRa it is called "kozonoša" (a goat carrier). The AdriaRc Lizard Orchid is an indicator species for Natura 2000 areas.



NAVADNA SPLAVKA

Limodorum abortivum (L.) Sw.



V-VI

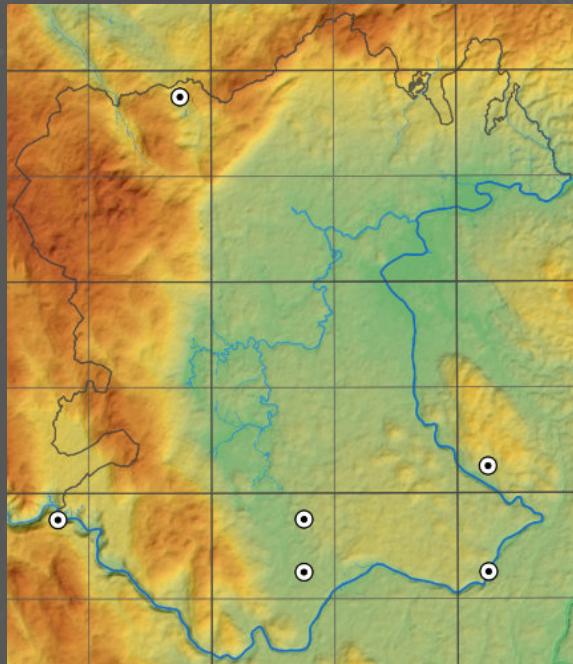
20-50 cm

Vezilja/Embroidereress: Sonja Šuster



Navadna splavka na prvi pogled sploh ne izgleda kot orhideja, saj iz zemlje požene samo močna stebla z izredno majhnimi listi. Velikost listov kaže na to, da večji del hrani pridobiva preko gliv, ki jih črpajo iz okoliških dreves. V Beli krajini uspeva v bližini mogočnih hrastovih dreves na zaraščajočih se travnikih. Je sicer dokaj redka vrsta, ki pa je lahko lokalno tudi izredno številčna.

VIOLET LIMODORE



At first glance, the Violet Limodore does not look like an orchid at all, as only strong stems with extremely small leaves grow from the ground. The size of the leaves indicates that most of the nutrients are obtained through fungi, which extract them from the surrounding trees. In Bela krajina it grows near the majestic oak trees on overgrown meadows. It is a rather rare species, but locally it can also be extremely numerous.



JAJČASTOLISTNI MUHOVNIK

Listera ovata (L.) R. Br.



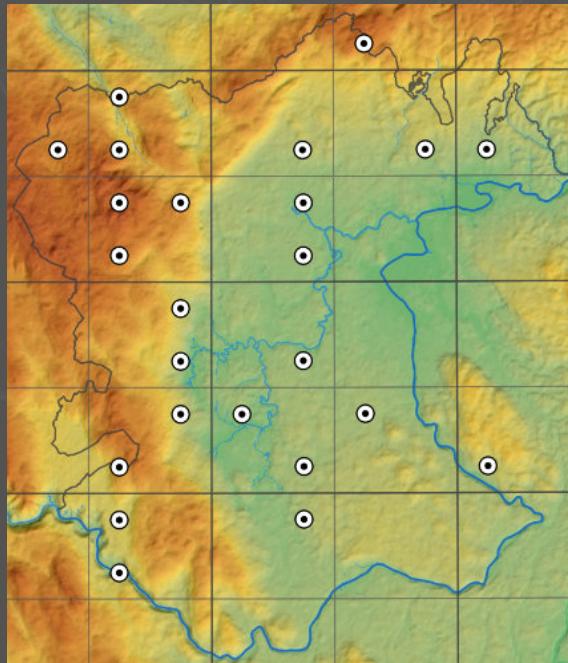
Vezilja/Embroidereress: Maja Madronič



Jajčastolistni muhovnik je dobil ime po dveh jajčastih listih. V socvetju se nahajajo zelenkasti cvetovi izrazito medeno ustno. Cvetovi izločajo obilo nektarja, ki privablja številne žuželke in pogosto ga nabirajo celo mravlje. V listih te vrste so bile odkrite spojine, ki zavirajo razvoj virusa HIV, vendar ni novejših podatkov o uporabi rastline za zdravljenje virusa. Vrsta je zelo pogosta in uspeva v gozdovih, na gozdnih robovih in travnikih.



TWAYBLADE



The Twayblade has two ovate leaves. In the inflorescence there are greenish flowers with a pronounced labellum. The flowers secrete an abundance of nectar, which attracts many insects and is sometimes even collected by ants. Compounds that inhibit the development of HIV have been found in the leaves of this species, but there is no recent data on the use of the plant to treat the virus. The species is very common and grows in forests, forest edges and meadows.

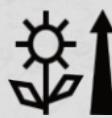


TRIZOBA KUKAVICA

Neotinea tridentata (Scop.) R. M. Bateman, Pridgeon & M. W. Chase subsp. *Tridentata*



V-VI



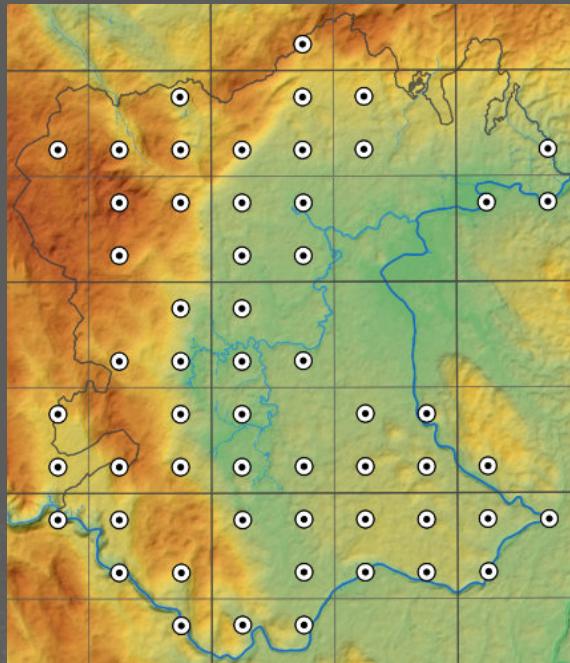
15-35 cm

Vezilja/Embroidereress: Sonja Šuster



Trizoba kukavica je orhideja suhih negnojenih travnikov. Ker na dolgi rok ne prenese gnojenja in zgodnje košnje je eden najboljših pokazateljev zdravja travnika. Navadno so travniki, kjer uspeva trizoba kukavica, biotsko izredno pestri in poleg nje na istem rastišču uspeva vsaj še nekaj vrst travniških orhidej (npr. navadna kukavica [*A. morio*], osjeliko mačje uho [*O. Sphegodes*], zavita škrbica [*S. Spirallis*]). Zelo rada se križa s pikastocvetno kukavico (*N. ustulata*), kar njen belkast cvet spremeni v rahlo vijoličnega. Trizoba kukavica je druga najpogostejša vrsta orhidej v Beli krajini, ki pa je vse bolj ogrožena zaradi vse hitrejšega opuščanja kmetovanja in zaraščanja travnikov.

THREE-TOOTHED ORCHID



The Three-toothed Orchid is an orchid which grows in dry unfertilised meadows. Because it does not tolerate fertilising and early mowing, it is one of the best indicators of a healthy meadow.

Meadows where the Three-toothed Orchid grows are usually biologically extremely diverse, and at least a few other species of meadow orchids grow in the same habitat (e.g. the Green-winged Orchid [*A. morio*], the Early Spider Orchid [*O. Sphegodes*], and the Autumn Lady's Tresses [*S. spirallis*]). It will cross-pollinate with the Burnt-Rip Orchid (*N. ustulata*), which turns its whitish flower into a slightly purple one. The Three-toothed Orchid is the second most common species of orchid in Bela krajina, but it is becoming increasingly endangered because of the rapid abandonment of farming and overgrowing of meadows.



PIKASTOCVETNA KUKAVICA

Neotinea ustulata (L.) R. M. Bateman, Pridgeon & M. W. Chase



V

10-40 cm

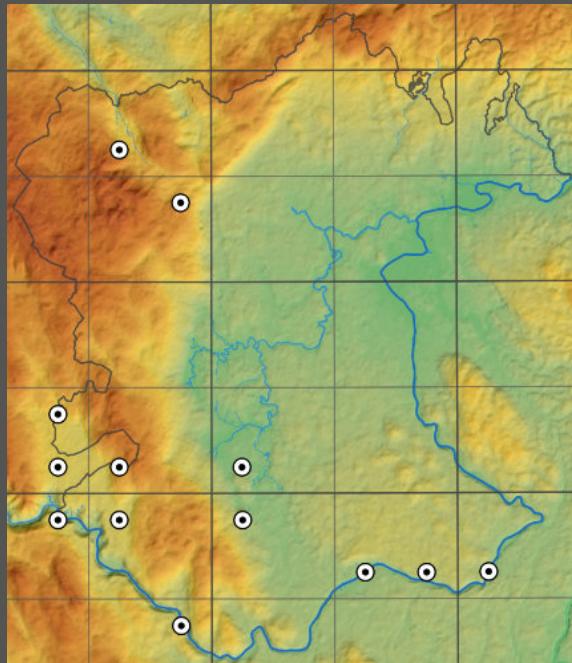


Vezilja/Embroidereress: Nives Rauh



Latinsko ime orhideje pomeni »ožgana«, »osmojena«, kar kaže na barvo mladega socvetja, ki je na zgornjem delu črnorjav – ožgano. Kukavica cveti v drugi polovici maja in spada med pozneje cvetoče vrste. Opraševalce privabljajo vonjem po vanilji in se pogosto križa s trizobo kukavico (*N. tridentata*), kar privede do bolj rožnatih odtenkov cvetov. Uspeva na suhih, negnojenih travnikih, ki vse bolj izginjajo, zato je ta vrsta dokaj ogrožena.

BURNT-TIP ORCHID



The LaRn name of the species means "burnt", or "singed", indicaRng the colour of the young inflorescence, which is black-brown on the upper part looking like it has been burnt. The Burnt-Rp Orchid blooms in the second half of May and is one of the later flowering species. It aRracts pollinators with its vanilla scent and oQen cross-pollinates with the Three-toothed Orchid (*N. tridentata*), causing a pinker shade offlowers. It grows in dry, unferRlised meadows which are increasingly disappearing, therefore this species is quite endangered.



POLETNA KUKAVICA

Neotinea ustulata var. aestivalis (Kümpel) Tali, M. F. Fay & R. M. Bateman



VI

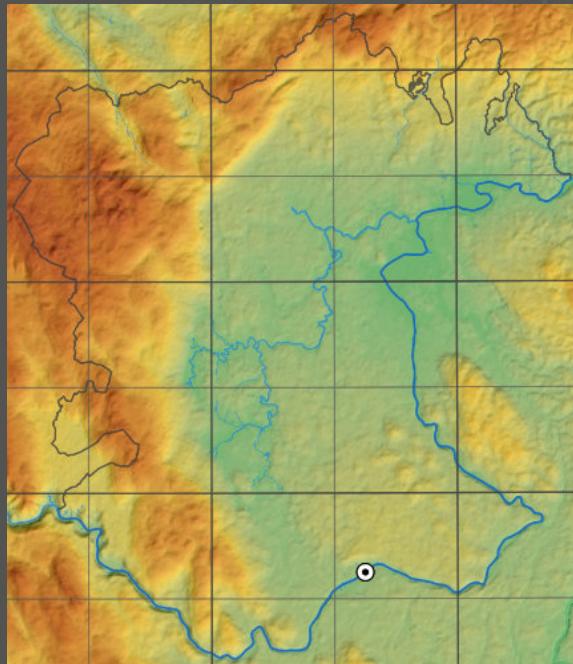
20-50 cm

Vezilja/Embroidereress: Nives Rauh



Poletna kukavica je zelo podobna pikastocvetni kukavici (*N. ustulata*). Od nje se bistveno loči predvsem po socvetju in steblu s prileglimi listi. Cveti v zgodnjem poletju, ko na travnikih večinoma več ni drugih cvetočih rastlin. V Beli krajini je zelo redka vrsta, ki uspeva samo na rastišču pri vasi Podklanec.

SUMMER BURNT-TIP ORCHID



The Summer Burnt-Tip orchid is very similar to the Burnt-Rp Orchid (*N. ustulata*). It can be differentiated from it mainly by the inflorescence and leaves which are tightly close to the stem. It blooms in early summer when there are mostly no other flowering plants in the meadows. In Bela krajina, it is a very rare species that grows only on one site near the village of Podklanec.



RJAVA GNEZDOVNICA

Neottia nidus-avis (L.) Rich.



V-VI

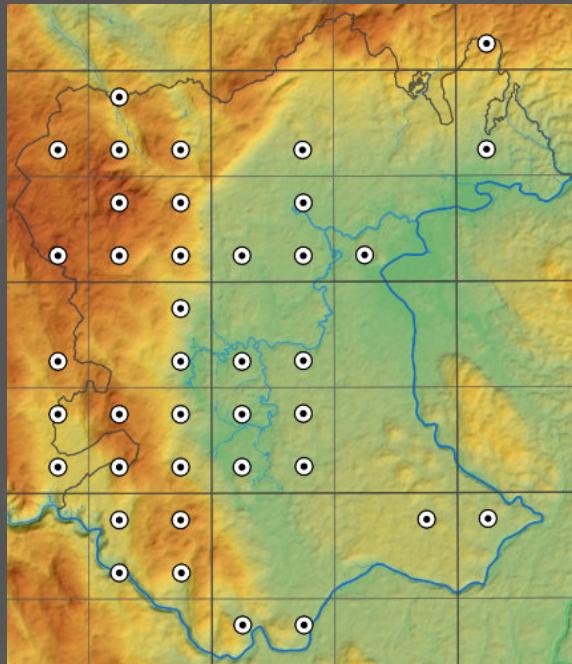
10-40 cm

Vezilja/Embroidereress: Anica Jesih



Rjava gnezdovnica je dobila ime po barvi socvetja in po koreninskem sistemu, ki spominja na ptičje gnezdo. Celotna rastlina je brez klorofila, kar dokazuje, da hraniла preko gliv dobiva od okoliških rastlin. V Slovenji je ena najpogostejših vrst, saj uspeva v vseh gozdnih habitatih, tudi takšnih, kjer primanjkuje svetlobe, saj jo gnezdovnica ne potrebuje v izobilju.

BIRD'S NEST ORCHID



The Bird's Nest Orchid is named after the colour of the inflorescence and after the root system, which resembles a bird's nest. The whole plant has no chlorophyll which proves that it receives nutrients through fungi from the surrounding plants. It is one of the most common species in Slovenia, as it grows in all forest habitats, even in those where there is a lack of light, as the Bird's Nest Orchid does not really need it.



ČEBELJELIKO MAČJE UHO

Ophrys apifera Huds.

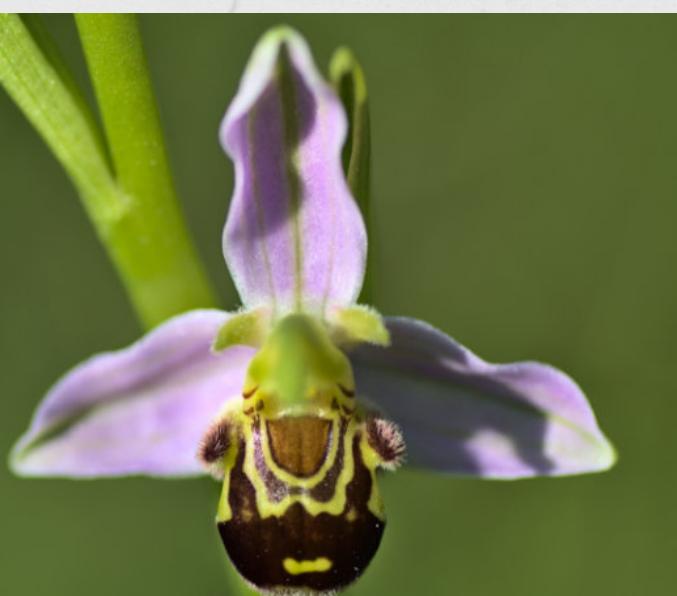


V-VI



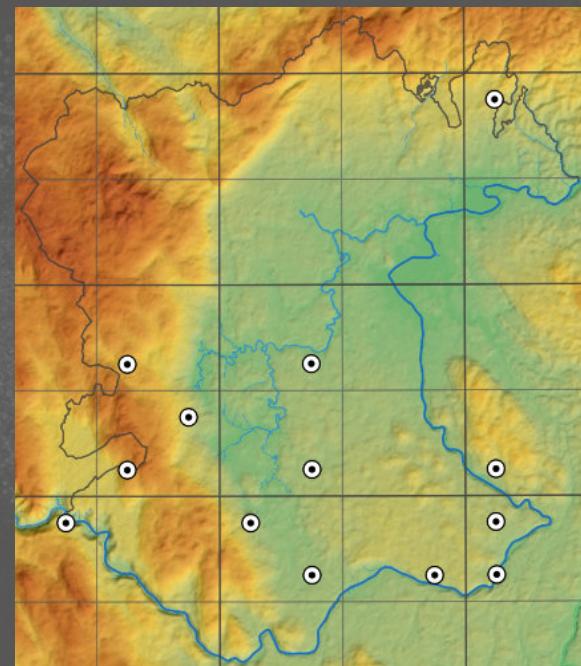
10-40 cm

Vezilja/Embroidereress: Iva Simčič



Ker ima v svojem imenu čebelo, bi pričakovali, da je le-ta njen opraševalec, vendar ni tako. To je ena redkih vrst mačjih ušes, ki se oprašijo same. Rezultat samooprašitev je majhna raznolikost cvetov, ki so sicer zaradi svojih barvnih kombinacij in kombinacij vzorcev eni najlepših med mačjimi ušesi. Mnoge medena ustna spominja bolj na možica kot na cvet. Cveti konec maja in v začetku junija na suhih negnojenih travnikih. Zaradi poznejšega cvetenja je zamenjava z drugimi vrstami mačjih ušes težja.

BEE ORCHID



Because it has the word “bee” in its name, you would expect the bee to be its pollinator, but this is not the case. It is one of the rare species of the Ophrys genus that self-pollinates, resulting in a small variety of flowers. Because of its colour and combination of patterns, it is one of the most beautiful species of the Ophrys genus. Some people think that the shape of the labellum resembles a little man rather than a flower. It blooms in late May and early June in dry, unferalised meadows. Due to its late flowering, it cannot be mistaken for any other species of the Ophrys genus.



ČMRJELIKO MAČJE UHO

Ophrys holoserica (Burm.f.) Greuter subsp. Holoserica



V-VI

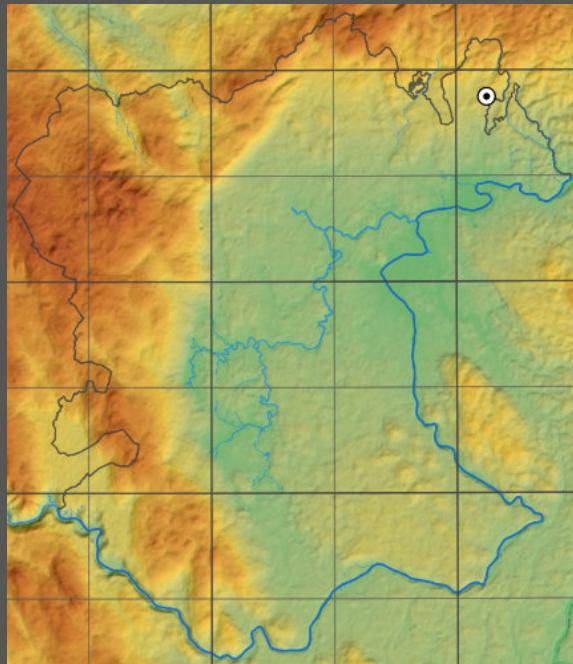
10-30 cm

Vezilja: Marija Marušič



Čmrjeliko mačje uho v celinski Sloveniji težko zamenjamo s katero drugo vrsto. Še najbolj podobno mu je čebeljeliko mačje uho (*O. apifera*), ki pa ima medeno ustno bolj okroglasto in manjše. Medena ustna čmrjelikega mačjega ušesa je na spodnjem delu razširjena in ima na vrhnjem delu ob strani dva izrazita kosmata izrastka, na spodnjem delu pa majhen naprej zavihani nazobčan privesek. Zunanji cvetni listi so lahko zelenkasti, beli ali pa tudi rožnati. Čmrjeliko mačje uho je redka vrsta, saj je bila najdena samo v okolici vas Vidošiči, kjer je edino območje z laporno sestavo tal v Beli krajini.

LATE SPIDER ORCHID

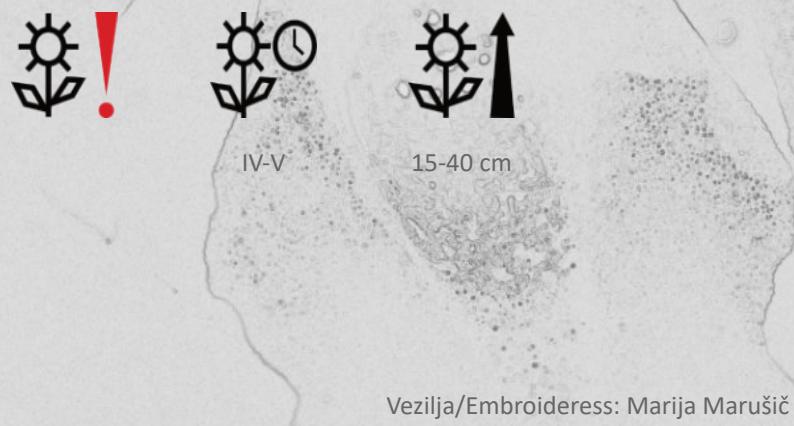


The Late Spider Orchid which grows in the middle of Slovenia cannot be mistaken for any other species. It is quite similar to the Bee Orchid (*O. apifera*), and has a more rounded and smaller labellum. The labellum of the Late Spider Orchid is wider at the bottom and has two distinct hairy growths on the upper part, and a small forward-curved toothed part on the underside. The outer petals can be greenish, white or even pink. The Late Spider Orchid is a rare species, as it has been found in the vicinity of the village of Vidošiči, the only area with marl soil composition in Bela krajina.



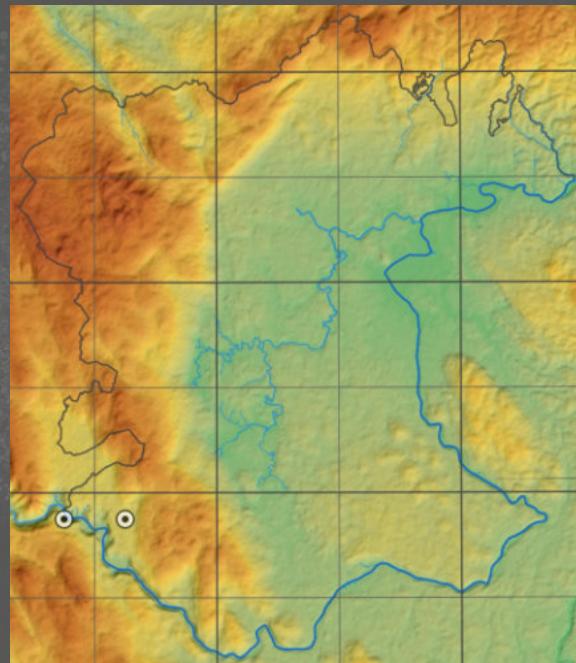
MUHOLIKO MAČJE UHO

*Ophrys insectifera L. subsp. *Insectifera**



To je zagotovo najbolj nežna vrsta iz rodu mačjih ušes. Zaradi svoje vitke pojave jo je izredno težko opaziti, še posebej, ker navadno okoli nje rastejo bolj robustne rastline. Vzorec na medeni ustni spominja na muho, od koder izvira tudi ime vrste. Navadno raste na obrobju travnikov, lahko tudi na zaraščajočih travnikih in skoraj po pravilu v bližini raste rdeči bor (*Pinus sylvestris*). V Beli krajini je zelo redka vrsta in je bila do sedaj odkrita samo v okolici Starega trga.

FLY ORCHID



It is certainly the most tender species of the genus *Orphys*. Because of its slender appearance, it is extremely difficult to notice, especially since more robust plants usually grow around it. The pattern on the honey lip resembles a fly, hence the name. It usually grows at the edge of meadows. It can be also found on overgrown pastures, but almost always where the Scots Pine (*Pinus sylvestris*) grows nearby. It is a very rare species in Bela krajina and so far has only been discovered in the vicinity of the village of Stari trg.



OSJELIKO MAČJE UHO

Ophrys sphegodes Mill.



IV-VI



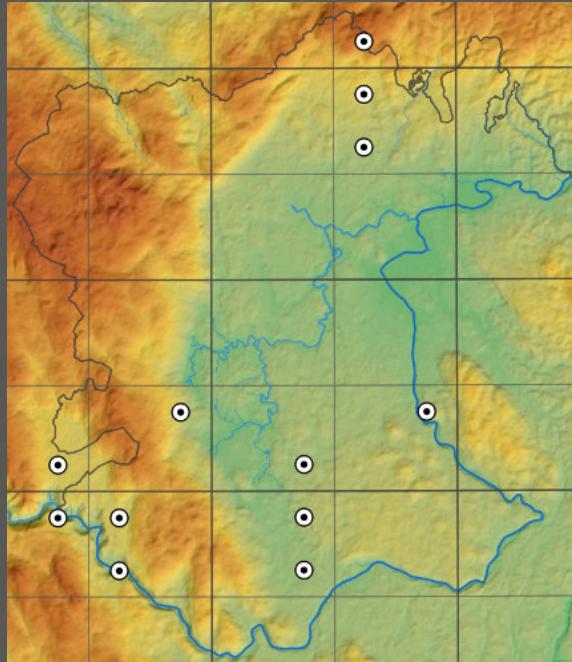
10-40 cm

Vezilja/Embroidereress: Anica Jesih



Osjeliko mačje uho je zelo zgodaj cvetoča vrsta, ki lahko zacveti že konec marca, ko se suhi negnojeni travniki šele prebujajo. Je redka vrsta, ki se pojavlja v večjih kolonijah in jo je zato dokaj enostavno opaziti. Spada v rod mačjih ušes (*Ophrys*), ki oprševalce privabljajo s feromoni in obliko medene ustne, ki je podobna samičkam nekaterih vrst os. Opršujejo jih samci os, ki na cvet priletijo z namenom parjenja. Pri tem jih mačja ušesa prevarajo in jim za nagrado na glavo prilepijo paketke peloda.

EARLY SPIDER ORCHID



The Early Spider Orchid is a very early flowering species. It can bloom as early as the end of March, when dry unfertilised meadows are just waking up. It is a rare species occurring in large populations and is therefore fairly easy to spot. It belongs to the *Ophrys* genus which attracts pollinators with pheromones and the shape of the labellum which resembles the female of some species of wasps. They are pollinated by male wasps which fly to the flower in order to mate. In doing so, it deceives them and they get packets of pollen on their heads as a reward.



ZVEZDASTA KUKAVICA

Orchis mascula subsp. speciosa (Mutel) Hegi



IV-V

20-60 cm

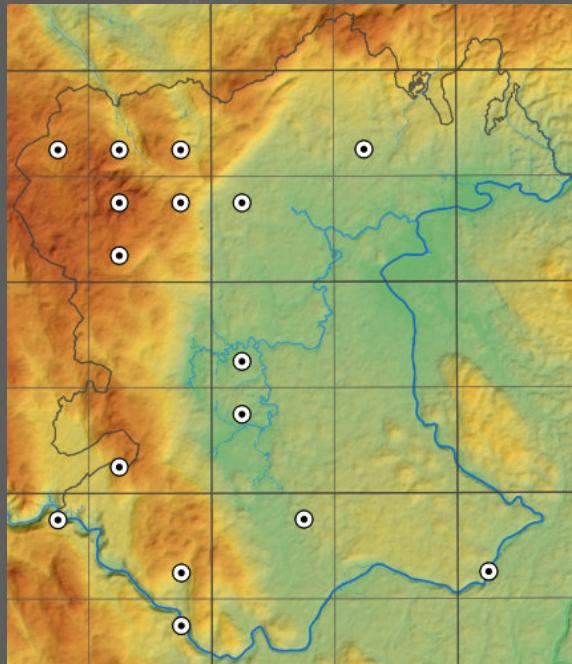
Vezilja/Embroidereress: Tatjana Flajnik



Zvezdasta kukavica je zelo zgodaj cvetoča vrsta, ki uspeva na gozdnem robu, v grmovju in ob robu suhih negnojenih travnikov. Navadno cveti takoj za bledo kukavico (*O. pallens*), včasih celo na istih rastiščih. Visoko steblo izrašča iz večjih svetlečih listov, ki so lahko posuti s temno vijoličnimi pikami. Zaradi zgodnjega cvetenja in višine steba je ne moremo zamenjati z nobeno drugo vrsto. V Beli krajini je dokaj pogosta vrsta z nekaj velikimi populacijami.



SHOWY EARLY PURPLE ORCHID



The Showy Early Purple Orchid is a very early flowering species that grows on the forest edge, underneath bushes and along the edge of dry unerRised meadows. It usually blooms immediately after the Pale Flowered Orchid (*O. pallens*), sometimes even in the same habitats. The tall stem grows from large shiny leaves that can be speckled with dark purple spots. Due to its early flowering and stem height, it cannot be mistaken for any other species. It is a fairly common species in Bela krajina with some large populaRons.



BLED A KUKAVICA

Orchis pallens L.



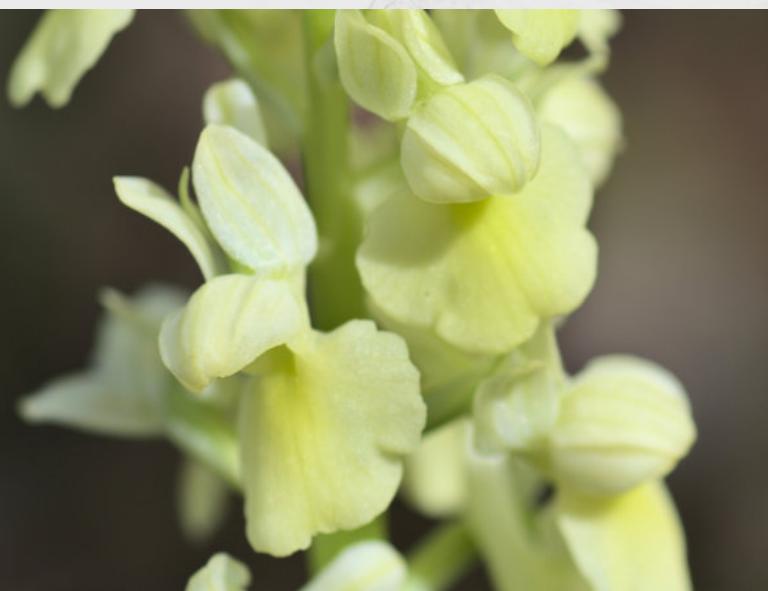
III-IV

15-30 cm

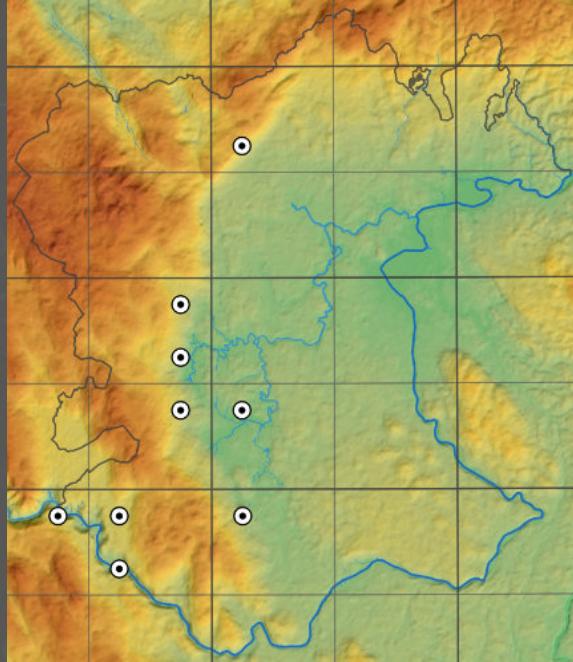
Vezilja/Embroidereress: Marija Marušič



V Beli krajini je to najbolj zgodaj cvetoča vrsta. Ob milih zimah lahko na sončnih jasah zacveti že konec marca. Navadno uspeva ob gozdnem robu, na zaraščajočih travnikih in tudi v gozdu. Lahko jo zamenjamo z rumeno varianto bezgove prstaste kukavice (*D. sambucina*). Od nje se loči po popolnoma rumenem cvetu, navzgor obrnjeni ostrogi in večjih svetlečih listih. Ker nima nektarja, oprševalce privablja z obliko cveta in neprijetnim vonjem, ki lahko spominja npr. na mačke ali bezeg.



PALE FLOWERED ORCHID



The Pale Flowered Orchid is the earliest flowering species in Bela krajina. In mild winters, it can bloom in sunny clearings as early as the end of March. It usually grows along forest edges, on overgrown meadows and also in the forest. It can be mistaken for the yellow variant of the Elder-flowered Orchid (*D. sambucina*). It is distinguished by its completely yellow flowers, upward-pointing spurs and larger shiny leaves. Because it has no nectar, it attracts pollinators with the shape of the flower and an unpleasant scent, like the smell of cat spray or elderflower.



ŠKRLATNORDEČA KUKAVICA

Orchis purpurea Huds.



IV-V



30-80 cm

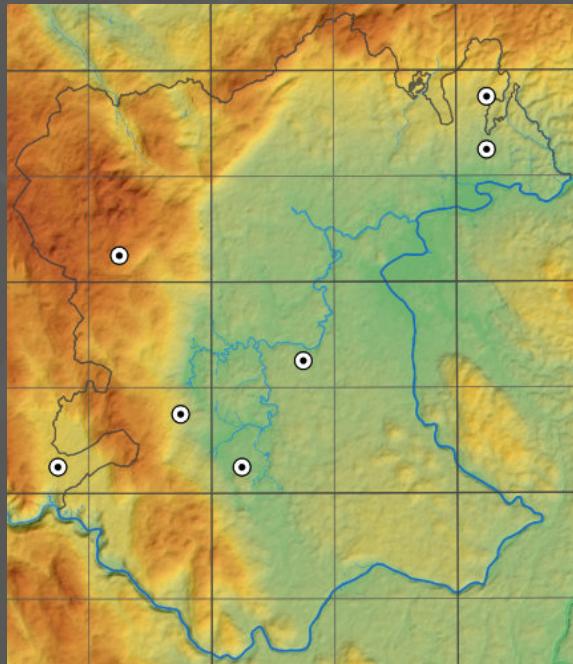
Vezilja/Embroidereress: Mira Madronič



Za mnoge najlepša vrsta orhidej, ki cveti v maju, najraje ob gozdnem robu. Do 80 cm visoko socvetje raste iz svetleče zelene rozete 4-5 velikih listov. Cvetovi imajo zelo razčlenjeno medeno ustno, ki je porasla s škrlatnimi laski. Opraševalce privablja s prijetnim in intenzivnim vonjem po vanilji. Škrlatnordeča kukavica je toploljubna vrsta, ki je bolj pogosta na Mediteranu, v celinski Sloveniji pa se pojavlja redkeje, prav tako v Beli krajini, kjer je bila najdena na osmih rastiščih.



LADY ORCHID



For many people this is the most beautiful species of orchid that blooms at the edge of the forest in May. Its flowering stem grows up to 80cm high from a shiny green rose of 4-5 large leaves. The flowers have a very fragmented labellum, which is covered with purple hairs. It attracts pollinators with a pleasant and intense vanilla scent. The Lady Orchid is a warm-loving species and is more commonly found in the Mediterranean, but is less common in the middle of Slovenia, as well as in Bela krajina, where it has only been found in eight habitats.



DVOLISTNI VIMENJAK

Platanthera bifolia (L.) Rich.



V-VI

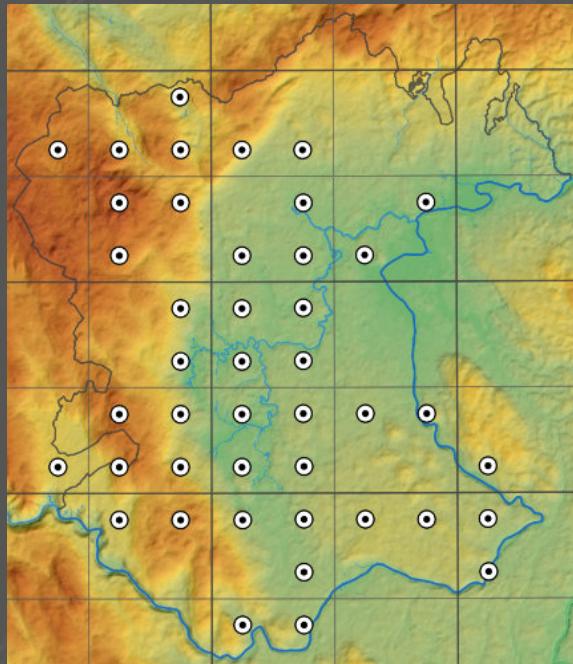
20-60 cm

Vezilja/Embroidereress: Mira Madronič



Dvolistni vimenjak je ena pogostejših vrst orhidej. Ta vrsta je dobila ime po dveh svetlo zelenih pritličnih listih. Uspeva na negnojenih travnikih, gozdnem robu in v gozdu. Opraševalce (v glavnem nočne metulje) privablja z zelo prijetnim vonjem, ki postane intenzivnejši ponoči. Nektar ima shranjen v zelo dolgi ostrogi, katere dolžina je prilagojena za točno določene vrste opräševalcev, ki imajo podobno dolge sesalne organe. Dvolistni vimenjak zlahka zamenjamo z zelenkastim vimenjakom (*P. chlorantha*), ki ima polinarija popolnoma narazen, je bolj robusten in je v Beli krajini veliko bolj redki.

LESSER BUTTERFLY ORCHID



The Lesser Butterlfy Orchid is one of the most common species of orchid. It gets its laRn name aQer the two light green leaves growing from the boRom. It grows in unferRised meadows, forest edges and in woods. It aRracts pollinators (mainly moths) with a very pleasant scent that becomes more intense at night. The nectar is stored in a very long spur, the length of which is adapted to specific species of pollinators that have similarly long proboscises. The Lesser Butterlfy Orchid is easily mistaken for the Greater Butterlfy Orchid (*P. chlorantha*), which has pollinia completely separate, but it is more robust and much rarer in Bela krajina.



ZELENKASTI VIMENJAK

Platanthera chlorantha (Custer) Rchb.



IV-V

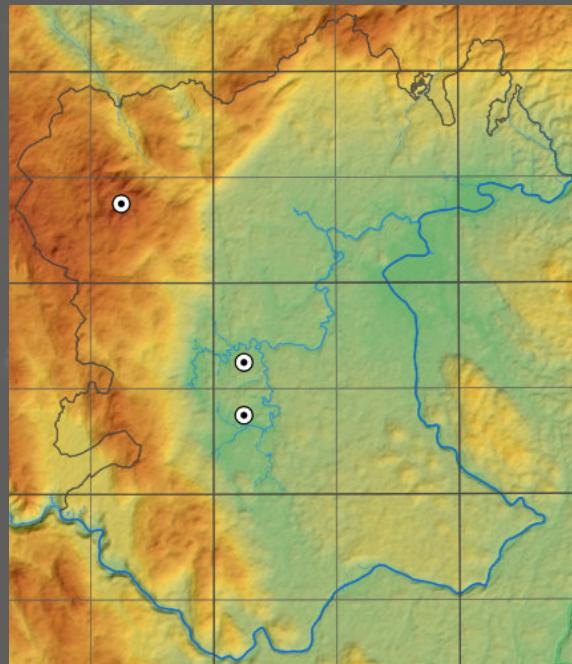
20-60 cm

Vezilja/Embroidereress: Verica Šikonja



Zelenkasti vimenjak je zelo podoben dvolistnemu vimenjaku (*P. bifolia*), od katerega se loči po bolj robustni pojavi, nekoliko bolj zelenkasti barvi cvetov in izrazito razkrečenih polinarijih. Ta morfološka razlika povzroči, da imata vrsti popolnoma različne oprševalce. Pojavijo se tudi križanci med obema vrstama, kar kaže na veliko genetsko sorodnost obeh vrst. Zelenkasti vimenjak je v Beli krajini zelo redka vrsta, saj je bila najdena samo na nekaj rastiščih v okolici Črnomlja.

GREATER BUTTERFLY ORCHID



The Greater Butterlfy Orchid is very similar to the Lesser Butterlfy Orchid (*P. bifolia*), from which it is distinguished by a more robust appearance, a slightly more greenish colour of flowers and quite separated pollinia. This morphological difference means that the species has completely different pollinators. Cross-pollination between the two species also occurs, indicating a high genetic similarity between them. The Greater Butterlfy Orchid is a very rare species in Bela krajina, as it has been found only in a few habitats in the vicinity of Černomelj.



ZAVITA ŠKRICA

Spiranthes spiralis (L.) Chevall.

VIII-X

10-30 cm

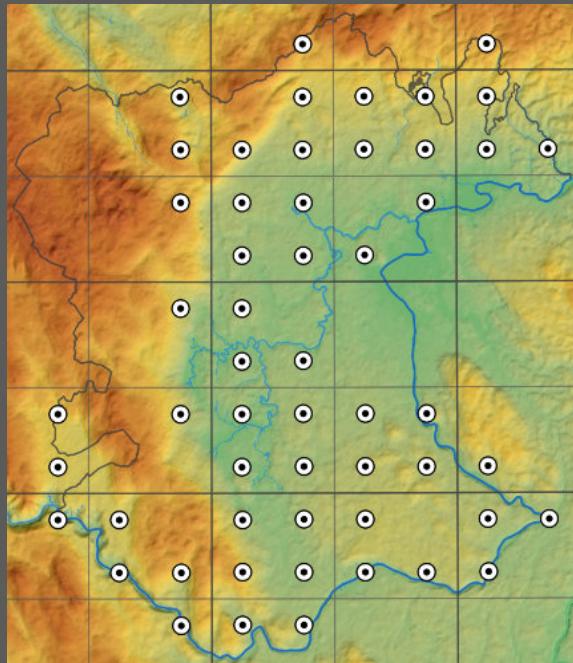


Vezilja/Embroidereress: Maja Madronič



Med vsemi orhidejami v Beli krajini je najbolj pozno cvetoča vrsta, ki cveti na suhih travnikih konec avgusta, septembra in tudi v oktobru. V Beli krajini je tretja najpogosteša vrsta. Začetek cvetenja je odvisen od količine padavin v poletnih mesecih, ko orhideja začenja z rastjo na prej vsaj dvakrat pokošenih travnikih. Ker je edina jesenska vrsta, jo je dokaj enostavno določiti, vendar jo je zaradi majhnosti zelo težko odkriti. Pogosto uspeva na travnikih, kjer spomladi cvetijo navadne (*A. morio*) in trizobe kukavice (*N. tridentata*). Običajno je visoka okoli 10 cm, redko pa doseže tudi do 20 cm višine. Zavito socvetje (po tem je dobila tudi ime) oddaja izredno prijeten vonj.

AUTUMN LADY'S TRESSES



Amongst all the orchids in Bela krajina, this is the latest flowering species which blooms in dry meadows in late August, September and also in October. It is the third most common species of orchid in Bela krajina. The start of the flowering season depends on the amount of rainfall in the summer months, when the orchid begins to grow on meadows that have been previously mown at least twice. As it is the only autumn species, it is quite easy to identify, but due to its small size it is very difficult to find. It often grows in meadows where the Green-winged Orchid (*A. morio*) and the Three-toothed Orchid (*N. tridentata*) bloom in spring. It is usually about 10cm high, and rarely reaches 20cm in height. The twisted inflorescence (after which it gets its name) produces an extremely pleasant scent.



NAVADNA OBLASTA KUKAVICA

Traunsteinera globosa (L.) Rchb.



V-VI

20-60 cm

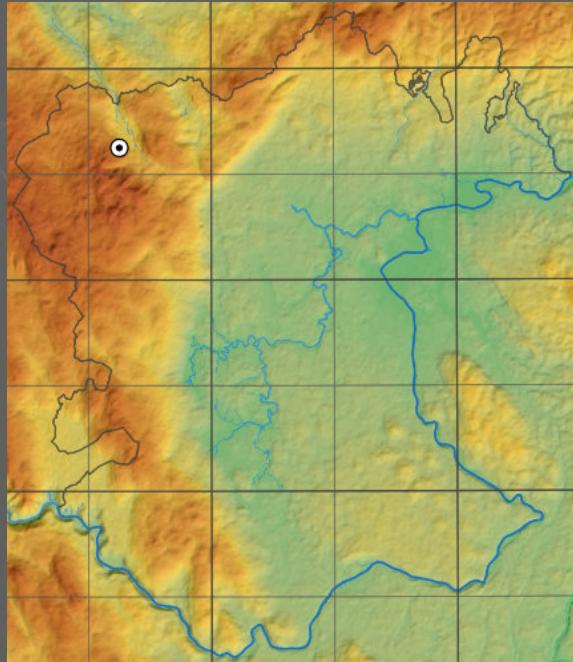


Vezilja/Embroidereress: Iva Simčič



Navadna oblasta kukavica ima oblasto obliko socvetja, ki od daleč spominja na trizobo kukavico (*N. tridentata*), vendar pri natančnem ogledu kukavice zamenjava ni mogoča. Orhideja je travniška vrsta, ki v Beli krajini uspeva na višje ležečih travnikih smučišča Gače (900 m n. m.). V Sloveniji je pogosta vrsta, najdemo jo tudi na višje ležečih travnikih bližnjih Gorjancev.

GLOBE ORCHID



The Globe Orchid has a round inflorescence which resembles the Three-toothed Orchid (*N. tridentata*) from a distance, but it is not possible to mistake it when looking more closely. The Globe Orchid is a meadow species that grows in Bela krajina on the higher meadows of the Gače ski resort (which is 900m above sea level) and on the nearby Gorjanci. It is a common species in Slovenia.



ŠTUDIJSKI KROŽKI

Na Zavodu za izobraževanje in kulturo Črnomelj izvajamo študijske krožke že od samega začetka delovanja krožkov v Sloveniji, to je od leta 1993.

Študijski krožki so oblika neformalnega učenja, v kateri se zbirajo ljudje, ki se želijo naučiti nečesa-novega, se družiti in narediti nekaj koristnega za svoj kraj in druge ljudi. Pogosto gre za prepletanje različnih generacij, kjer se znanje in izkušnje prenašajo med člani krožka.

Vsebine, s katerimi se ukvarjajo člani študijskih krožkov, so različne. Zlasti zanimive so vsebine s področja gibanja za zdravje, zdrave prehrane, ohranjanja kulturne in naravne dediščine ter spodbujanja podjetništva. Študijski krožki so tesno povezani z lokalnim okoljem oziroma z domačo kulturo, izročilom in naravo Bele krajine. Zlasti v podeželskem okolju, v oddaljenejših krajih, so krožki postali element povezovanja, sodelovanja in učenja.

STUDY CIRCLES

At the Institute for Education and Culture Črnomelj, Study Circles have been conducted since 1993. It is from the very beginning of their inception in Slovenia.

Study circles are a form of non-formal learning that brings together people who want to learn something new, to socialise and to do something useful for their local community and for other people as well. It is most often an intertwining of different generations, where knowledge and experience are passed on among the members of the study circle.

The topics covered by the members of the study circles are different. Of particular interest are those regarding health, like walking for health, healthy eating, preservation of cultural and natural heritage, and the promotion of entrepreneurship. The study circles are closely connected with the local community, the local

V zadnjih 25 letih so bili na ZIK-u najodmevnnejši naslednji študijski krožki: Prehrana v Velikem Nerajcu, Petje nas druži, Germanizmi v belokranjskem narečju, Kulinarische posebnosti Bele krajine, Spodbujanje gledališke dejavnosti, Belokranjsko plesno izročilo, Gribeljska čebula, Vezenje v Beli krajini, Belokranjske krpanke, Trajnostni vrt, Pozabljene belokranjske besede, Pastirske igre, Poljanska dolina ob Kolpi – dolina zgodb, Zgodbe o Kolpi, študijski krožki s področja zeliščarstva in krožek Orhideje in vezenine.

Študijske krožke razvija Andragoški center Slovenije, sofinancira pa Ministrstvo za izobraževanje, znanost in šport.

ŠTUDIJSKI KROŽEK: ORHIDEJE IN VEZENINE

V pričajoči knjigi so orhideje predstavljene na vezenih izdelkih, ki so jih ustvarile članice študijskega krožka. Zapis

culture, tradition, and nature of Bela krajina. Especially in rural areas and in more remote villages, study circles have become a way of socialising, co-operation and learning.

In the last 25 years, the most successful study circles organised by the Institute for Education and Culture Črnomelj were: Nutrition in the Village of Veliki Nerajec, Singing Unites Us, Germanic Influence in the Dialect of Bela krajina, Culinary Specialities of Bela krajina, Promotion of Theatre Activities, Bela krajina Folk Dance Tradition, the Griblje Onion, Embroidery in Bela krajina, Bela krajina patchwork, Sustainable Gardening, the Forgotten Words of the Bela krajina Dialect, Pastoral Games, The Valley of Poljane by the River Kolpa – The Valley of Tales, Stories about the Kolpa River, study circles in the field of herbalism and the study circle Orchids and Embroidery.

Study circles are being developed by the Slovenian Centre for Adult Education Science and Sport.

o orhidejah in fotografije orhidej v naravi je prispeval Jernej Kavšek.

Strokovni pregled zapisa o divje rastočih orhidejah je za knjigo naredil Branko Dolinar, eden največjih strokovnjakov s tega področja v Sloveniji.

Članice študijskega krožka Orhideje in vezenine, ki poteka na ZIK Črnomelj, so razvile motive divje rastočih orhidej, ki jih lahko opazujemo po belokranjskih travnikih. Prenele so jih na vezene izdelke. Svoje izdelke so predstavile na razstavah v Starem trgu, Semiču, Črnomlju, Škofji Loki in Žuničih. Mentorica skupini na področju vezenja je Antonija Dvojmoč, mojstrica vezenja.

Strokovno znanje o divje rastočih orhidejah članicam krožka posreduje mag. Jernej Kavšek, ki se ljubiteljsko ukvarja z njimi in ureja spletno stran Orhideje Bela krajine.

STUDY CIRCLE: ORCHIDS AND EMBROIDERY

In the present book, orchids are presented on embroidered products created by the members of the study circle. The record of orchids and the photographs of them in their natural habitat were contributed by Jernej Kavšek.

Branko Dolinar, one of the greatest experts in this field in Slovenia, has made an expert review of the record on wild orchids for the book.

The members of the study circle, Orchids and Embroidery, which is organised at ZIK Črnomelj, have developed the motifs of wild orchids that can be seen in the grasslands of Bela krajina, and have embroidered them. They have already presented their embroideries at exhibitions in Stari trg, Semič, Črnomelj, Škofja Loka and Žuniči. The mentor of the embroidery study circle is Antonija Dvojmoč, an embroidery expert.

ČLANICE ŠK ORHIDEJE IN VEZENINE:

Antonija Dvojmoč

Tatjana Flajnik

Tatjana Jakofčič

Anica Jesih

Maja Madronič

Mira Madronič

Marija Marušič

Vida Mesarič

Marija Prašin Kolbezen

Nives Rauh

Iva Simčič

Verica Šikonja

Antonija Zvonka Šterbenc

Sonja Šuster

Tatjana Žlak

Marija Žunič



Expert knowledge of wild orchids was provided to the members of the study circle by Jernej Kavšek, M.Sc. who is passionate about wild orchids as a hobby. He also manages the Bela krajina Orchid website.

MEMBERS OF THE STUDY CIRCLE ORCHIDS AND EMBROIDERY:

Antonija Dvojmoč

Tatjana Flajnik

Tatjana Jakofčič

Anica Jesih

Maja Madronič

Mira Madronič

Marija Marušič

Vida Mesarič

Marija Prašin Kolbezen

Nives Rauh

Iva Simčič

Verica Šikonja

Antonija Zvonka Šterbenc

Sonja Šuster

Tatjana Žlak

Marija Žunič

Avtor besedila, zemljevidov najdišč in fotografij divje rastočih orhidej: mag. Jernej Kavšek

Vodja študijskih krožkov: mag. Nada Žagar

Mentorica študijskega krožka Orhideje in vezenine:
mag. Irena Bohte

Urednika: mag. Irena Bohte in mag. Jernej Kavšek.

Fotografije vezenin: Uroš Novina

Fotografija na prvi strani naslovnice: muholiko mačje uho
(*Ophrys insectifera*)

Fotografija vezenine na prvi notranji strani: rdeča naglavka (*Cephalanthera rubra*), vezilja Anica Jesih

Recenzija: Branko Dolinar

Prevod v angleščino: Gill Wright in Antonija Zvonka Šterbenc

Author of the text, maps of habitats, and photos: Jernej Kavšek M.Sc.

Study circle leader: Nada Žagar M.Sc.

Study circle mentor: Irena Bohte M.Sc.

Editors: Irena Bohte M.Sc. and Jernej Kavšek M.Sc.

Embroidery photos: Uroš Novina

Cover photo: The Fly Orchid (*Orphrys insectifera*)

Photo of embroidery on the inside page: The Red Helleborine (*Cephalanthera rubra*), Embroidereress: Anica Jesih

Reviewer and foreword: Branko Dolinar

Translated by Gill Wright and Antonija Zvonka Šterbenc

Jezikovni pregled: Nastasja Schweiger

Oblikovanje: Mamart, d. o. o.

Tisk: Grafika Gracer, d. o. o.

Izdal: Zavod za izobraževanje in kulturo Črnomelj, zanj
mag. Nada Žagar

Število izvodov: 300

Oktober 2021

Zavod za izobraževanje in kulturo Črnomelj

Ulica Otona Župančiča 1

8340 Črnomelj

Tel: +386 (0)7 30 61 390

E-naslov: info@zik-crnomelj.si

Spletna stran: www.zik-crnomelj.eu

Slovene language editor: Nastasja Schweiger

Graphic design: Mamart d.o.o.

Printing: Grafika Gracer d.o.o.

Issued and published by the Institute for Education and Culture Črnomelj

Print run: 300

October 2021

The Institute for Education and Culture Črnomelj

Ulica Otona Župančiča 1

8340 Črnomelj

Tel: +386 (0)7 30 61 390

E-mail: info@zik-crnomelj.si

Website: www.zik-crnomelj.eu

SEZNAM IMEN ORHIDEJ

1.	Bezgova prstasta kukavica	str. 44	12.	Greuterjeva močvurnica	str. 50
2.	Bleda kukavica	str. 100	13.	Jadranska smrdljiva kukavica	str. 76
3.	Bleda naglavka	str. 32	14.	Jajčastolistni muhovnik	str. 80
4.	Čebeljeliko mačje uho	str. 90	15.	Kratkolistna močvurnica	str. 54
5.	Čmrjeliko mačje uho	str. 92	16.	Mesnordeča prstasta kukavica	str. 38
6.	Dehteči kukovičnik	str. 74	17.	Metuljasta kukavica	str. 28
7.	Dolgolistna naglavka	str. 34	18.	Močvirnska kukavica	str. 26
8.	Drobnolistna močvurnica	str. 60	19.	Muholiko mačje uho	str. 94
9.	Dvolistni vimenjak	str. 104	20.	Müllerjeva močvurnica	str. 62
10.	Fuchsova prstasta kukavica	str. 40	21.	Navadna kukavica	str. 24
11.	Gostocvetni kukovičnik	str. 72	22.	Navadna močvurnica	str. 64

INDEX OF COMMON NAMES OF ORCHIDS

1.	Adriatic Lizard Orchid	page 77	12.	Early Spider Orchid	page 97
2.	Autumn Lady's Tresses	page 109	13.	Elder-flowered Orchid	page 45
3.	Bee Orchid	page 91	14.	Fly Orchid	page 95
4.	Bird's Nest Orchid	page 89	15.	Fragrant Orchid	page 71
5.	Broad-leaved Helleborine	page 53	16.	Frog Orchid	page 47
6.	Bug Orchid	page 23	17.	Globe Orchid	page 111
7.	Burnt-tip Orchid	page 85	18.	Greater Butterfly Orchid	page 107
8.	Common Spotted Orchid	page 41	19.	Green-winged Orchid	page 25
9.	Dark-red Helleborine	page 49	20.	Greuter's Helleborine	page 51
10.	Dense-flowered Fragrant Orchid	page 73	21.	Lady Orchid	page 103
11.	Early Marsh Orchid	page 39	22.	Late Spider Orchid	page 93

23.	Navadna oblasta kukavica	str. 110	35.	Rjava gnezdovnica	str. 88
24.	Navadna splavka	str. 78	36.	Steničja kukavica	str. 22
25.	Navadni kukovičnik	str. 70	37.	Širokolistna močvirnica	str. 52
26.	Osjeliko mačje uho	str. 96	38.	Škrlatnordeča kukavica	str. 102
27.	Ozkoustna močvirnica	str. 56	39.	Temnordeča močvirnica	str. 48
28.	Pikastocvetna kukavica	str. 84	40.	Transilvanska prstasta kukavica	str. 42
29.	Piramidasti pilovec	str. 30	41.	Trizoba kukavica	str. 82
30.	Poletna kukavica	str. 86	42.	Zavita škrbica	str. 108
31.	Pontska močvirnica	str. 66	43.	Zeleni volčji jezik	str. 46
32.	Prezrta močvirnica	str. 58	44.	Zelenkasti vimenjak	str. 106
33.	Purpurna močvirnica	str. 68	45.	Zvezdasta kukavica	str. 98
34.	Rdeča naglavka	str. 36			

23.	Lesser Butterfly Orchid	page 105	35.	Short-spurred Fragrant Orchid	page 75
24.	Marsh Helleborine	page 65	36.	Showy Early Purple Orchid	page 99
25.	Marsh Orchid	page 27	37.	Small-leaved Helleborine	page 61
26.	Müller's Helleborine	page 63	38.	Summer Burnt-tip Orchid	page 87
27.	Narrow-lipped Helleborine	page 57	39.	Sword-leaved Helleborine	page 35
28.	Narrow-lipped Neglected Helleborine	page 59	40.	Three-toothed Orchid	page 83
29.	Orbiculär Broad-leaved Helleborine	page 55	41.	Transylvanian Heath Spotted Orchid	page 43
30.	Pale Flowered Orchid	page 101	42.	Twayblade	page 81
31.	Pink Butterfly Orchid	page 29	43.	Violet Helleborine	page 69
32.	Pontic Helleborine	page 67	44.	Violet Limodore	page 79
33.	Pyramidal Orchid	page 31	45.	White Helleborine	page 33
34.	Red Helleborine	page 37			

SEZNAM ZNANSTVENIH IMEN ORHIDEJ

LIST OF THE SCIENTIFIC NAMES OF ORCHIDS

1. *Anacamptis coriophora* (L.) R. M. Bateman, Pridgeon & M. W. Chase
2. *Anacamptis morio* (L.) R. M. Bateman, Pridgeon & M. W. Chase
3. *Anacamptis palustris* (Jacq.) R. M. Bateman, Pridgeon & M. W. Chase
4. *Anacamptis papilionacea* (L.) R.M. Bateman
5. *Anacamptis pyramidalis* (L.) Rich.
6. *Cephalanthera damasonium* (Mill.) Druce
7. *Cephalanthera longifolia* (L.) Fritsch
8. *Cephalanthera rubra* (L.) Rich.
9. *Dactylorhiza incarnata* (L.) Soó
10. *Dactylorhiza maculata* subsp. *Fuchsii* (Druce) Hyl.
11. *Dactylorhiza maculata* subsp. *Transsilvanica* (Schur) Soó
12. *Dactylorhiza sambucina* (L.) Soó
13. *Dactylorhiza viridis* (L.) R. M. Bateman, Pridgeon & M. W. Chase
14. *Epipactis atrorubens* (Hoffm. Ex Bernh.) Besser
15. *Epipactis greuteri* H. Baumann & Künkele
16. *Epipactis helleborine* (L.) Crantz
17. *Epipactis helleborine* (L.) subsp. *Orbicularis* (K. Richt.) E. Klein
18. *Epipactis leptochila* (Godfery) Godfery
19. *Epipactis leptochila* (Godfery) Godfery subsp. *Neglecta* Kümpel
20. *Epipactis microphylla* (Ehrh.) Sw.
21. *Epipactis muelleri* Godfery

-
22. *Epipactis palustris* (L.) Crantz
 23. *Epipactis pontica* Taubenheim
 24. *Epipactis purpurata* Sm.
 25. *Gymnadenia conopsea* (L.) R. Br.
 26. *Gymnadenia conopsea* subsp. *Densiflora* (Wahlenb.) K. Richt
 27. *Gymnadenia odoratissima* (L.) Rich.
 28. *Himantoglossum adriaticum* H. Baumann
 29. *Limodorum abortivum* (L.) Sw.
 30. *Listera ovata* (L.) R. Br.
 31. *Neotinea tridentata* (Scop.) R. M. Bateman, Pridgeon & M. W. Chase subsp. *Tridentata*
 32. *Neotinea ustulata* (L.) R. M. Bateman, Pridgeon & M. W. Chase
 33. *Neotinea ustulata* var. *aestivalis* (Kümpel) Tali, M. F. Fay & R. M. Bateman
 34. *Neottia nidus-avis* (L.) Rich.
 35. *Ophrys apifera* Huds.
 36. *Ophrys holoserica* (Burm.f.) Greuter subsp. *Holoserica*
 37. *Ophrys insectifera* L. subsp. *Insectifera*
 38. *Ophrys sphegodes* Mill.
 39. *Orchis mascula* subsp. *speciosa* (Mutel) Hegi
 40. *Orchis pallens* L.
 41. *Orchis purpurea* Huds.
 42. *Platanthera bifolia* (L.) Rich.
 43. *Platanthera chlorantha* (Custer) Rchb.
 44. *Spiranthes spiralis* (L.) Chevall.
 45. *Traunsteinera globosa* (L.) Rchb. 42. *Platanthera chlorantha* (Custer) Rchb.

UPORABLJENA LITERATURA IN VIRI

- Anonymous, 2002: Pravilnik o uvrstitvi ogroženih rastlinskih in živalskih vrst v rdeči seznam. Priloga 1: Rdeči seznam praprotnic in semenk (Pterydophyta & Spermatophyta). Uradni list RS 82/2002: 5-20.
- Anonymous, 2004: Uredba o zavarovanih prosto živečih rastlinskih vrstah. Ur. L. RS, št. 46.
- Dolinar, B., 2015: Kukavičevke v Sloveniji. Pipinova knjiga. Podsmreka.
- Delforge, P., 2006: Orchids of Europe, North Africa and the Middle East. A&C Black. London.
- Gorelick, N., Hancher, M., Dixon, M., Ilyushchenko, S., Thau, D., & Moore, R., 2017: Google Earth Engine Planetary-scale geospatial analysis for everyone. Remote Sensing of Environment.
- Jogan, N. (ur.), T. Bačič, B. Frajman, I. Leskovar, D. Naglič, A. Podobnik, B. Rozman, S. Strgulc - Krajšek & B. Trčak, 2001. Gradivo za atlas flore Slovenije. Center za kartografijo favne in flore. Miklavž na Dravskem polju.
- Kavšek, J., 2013: Nekatera zanimiva rastišča orhidej v Beli krajini. In: M. Štangelj & M. Ivanovič (ur.): Narava Bele krajine. Belokranjski muzej, Metlika. Pp. 103-109.

REFERENCES

- Anonymous, 2002: Pravilnik o uvrstitvi ogroženih rastlinskih in živalskih vrst v rdeči seznam. Priloga 1: Rdeči seznam praprotnic in semenk (Pterydophyta & Spermatophyta). Uradni list RS 82/2002: 5-20.
- Anonymous, 2004: Uredba o zavarovanih prosto živečih rastlinskih vrstah. Ur. L. RS, št. 46.
- Dolinar, B., 2015: Kukavičevke v Sloveniji. Pipinova knjiga. Podsmreka.
- Delforge, P., 2006: Orchids of Europe, North Africa and the Middle East. A&C Black. London.
- Gorelick, N., Hancher, M., Dixon, M., Ilyushchenko, S., Thau, D., & Moore, R., 2017: Google Earth Engine Planetary-scale geospatial analysis for everyone. Remote Sensing of Environment.
- Jogan, N. (ur.), T. Bačič, B. Frajman, I. Leskovar, D. Naglič, A. Podobnik, B. Rozman, S. Strgulc - Krajšek & B. Trčak, 2001. Gradivo za atlas flore Slovenije. Center za kartografijo favne in flore. Miklavž na Dravskem polju.
- Kavšek, J., 2013: Nekatera zanimiva rastišča orhidej v Beli krajini. In: M. Štangelj & M. Ivanovič (ur.): Narava Bele krajine. Belokranjski muzej, Metlika. Pp. 103-109.

- Kavšek, J., 2015: Prispevek k poznavanju razširjenosti kukavičevk Bele Krajine (JV Slovenija). *Folia biologica et geologica* (Ljubljana) 56 (3): 57–80.
- Kavšek, J., 2020: Spletna stran Orhideje Bele krajine. www.orhideje-bk.eu.
- Kuhn, R., H. Pedersen, & P. Cribb, 2019: Field Guide to the Orchids of Europe and the Mediterranean, Royal Botanic Gardens, Kew.
- Niklfeld, H., 1971: Bericht über die Kartirung der Flora Mitteleuropas. *Taxon* (Berlin) 20: 545-571.
- Plut, D., 2013: Nekatere geografske značilnosti Bele krajine. In: M. Štangelj & M. Ivanovič (ed.): Narava Bele krajine. Belokranjski muzej, Metlika. Pp. 15-19.
- Ravnik, V., 2002: Orhideje Slovenije. Tehniška založba Slovenija. Ljubljana.
- Swarts N. D.& K. W. Dixon, 2017: Conservation Methods for Terrestrial Orchids, J. Ross Publishing, Plantation.
- Vreš, B. & A. Seliškar, 2013: Flora in vegetacija Bele krajine. In: M. Štangelj & M. Ivanovič (ur.): Narava Bele krajine. Belokranjski muzej, Metlika. Pp. 71-86.
- Kavšek, J., 2015: Prispevek k poznavanju razširjenosti kukavičevk Bele Krajine (JV Slovenija). *Folia biologica et geologica* (Ljubljana) 56 (3): 57–80.
- Kavšek, J., 2020: Spletna stran Orhideje Bele krajine. www.orhideje-bk.eu.
- Kuhn, R., H. Pedersen, & P. Cribb, 2019: Field Guide to the Orchids of Europe and the Mediterranean, Royal Botanic Gardens, Kew.
- Niklfeld, H., 1971: Bericht über die Kartirung der Flora Mitteleuropas. *Taxon* (Berlin) 20: 545-571.
- Plut, D., 2013: Nekatere geografske značilnosti Bele krajine. In: M. Štangelj & M. Ivanovič (ed.): Narava Bele krajine. Belokranjski muzej, Metlika. Pp. 15-19.
- Ravnik, V., 2002: Orhideje Slovenije. Tehniška založba Slovenija. Ljubljana.
- Swarts N. D.& K. W. Dixon, 2017: Conservation Methods for Terrestrial Orchids, J. Ross Publishing, Plantation.
- Vreš, B. & A. Seliškar, 2013: Flora in vegetacija Bele krajine. In: M. Štangelj & M. Ivanovič (ur.): Narava Bele krajine. Belokranjski muzej, Metlika. Pp. 71-86.

